THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

VOL. LXXIII. NEW YORK, SATURDAY, JULY 9, 1898. NO. 2.

ORIGINAL ARTICLES.

THE TUBERCULIN TEST IN CERVICAL ADENITIS.[1]

BY EDWARD O. OTIS, M.D.,
OF BOSTON, MASS.

IT has been generally considered, I think, that a large number of cases of cervical adenitis are tuberculous, particularly if they are of slow growth and long continuance. The direct proof of this, however, as Volland[2] says, is very difficult to obtain, and I am not aware of any series of exact investigations undertaken to determine the proportion of tuberculous cases, or any decisive method of diagnosis in individual instances of the affection under consideration, other than the laborious one of making a microscopic examination of the contents and walls of the glands, or possibly by animal experimentation. In this latter method Bollinger[3] found that there must be a certain number of tubercle bacilli in the material injected to produce results, so that this test may fail. Volland,[4] in a series of observations made in Davos and its vicinity upon school children and others, found that among 2506 persons examined, enlarged cervical glands were present between the ages of 7 and 9 years, in 96 per cent.; between 10 and 12 years, in 91.6 per cent.; between 13 and 15 years, in 84 per cent.; between 16 and 18 years, in 69.7 per cent., and between 19 and 24 years, in 68.3 per cent. He comes to the conclusion from these observations (it is difficult to understand upon what definite grounds) that 68 per cent. of enlarged cervical glands are tuberculous. In persons known to be tuberculous in whom hard glands in the neck exist, Volland considers these tuberculous also and states that they will be found to contain tubercle bacilli or spores. In 108 phthisical patients he found that in 101 enlarged cervical glands were present. Cornet found in a Catholic sisterhood that of those sisters dying of tuberculosis, 63 per cent. had enlarged cervical glands which he considered tuberculous. When enlarged glands occur in childhood and persist in later life Volland thinks that when pulmonary tuberculosis develops in such cases the infection is conveyed from the glands to the lungs, and that it is very unlikely that the gland tuberculosis is secondary to that in the lungs. If this is true the importance of determining the nature of cervical glands can hardly be overestimated, for the treatment is both urgent and imperative.

It occurred to me that the tuberculin test was available for this purpose, being both easy and rapid in its application. I therefore determined to use it in every case of enlarged glands of the neck as such occurred in dispensary practice. No selection was made, but every case was tested, no matter whether the enlarged glands had existed a long or short period, or whether local irritation existed, such as a decayed tooth, the irritation from pediculi capitis, etc., which seemed the probable cause.

The tuberculin was obtained from the Massachusetts General Hospital in the form of a one-per-cent. solution of Koch's original tuberculin. The usual aseptic precautions were observed in making the injections: the needle was boiled, the syringe cleansed with ninety-five-per-cent. alcohol, and the site of injection scrubbed with soap and water and a bichloride of mercury solution. The injection was usually given in the muscles of the upper arm, and there always resulted local induration, redness, and tenderness, disappearing within a few days. In no case did abscess result. Probably an injection into the muscles of the back would have caused less discomfort, but in an out-patient clinic the arm was more available. With ambulatory patients it was impossible to make frequent observations of temperature, although it was generally taken at the time of the injection and from six to twelve hours later. The statement of the patient as to his sensations was principally relied upon as to whether or not a reaction had occurred, and experience convinced us that this was safe evidence; in other words, dependence was placed upon the constitutional disturbance. If from six to twenty-four hours after the injection there occurred weakness, sensations of heat and cold, general malaise, nausea, anorexia, severe headache, pain in the back and limbs, a feeling, as many expressed it, as if they had the "grippe," and these symptoms were sharply defined both in their beginning and ending, a reaction was considered to have occurred. The group of symptoms described by the reaction cases was quite constant and so clearly expressed from a vivid realization of their experience that there seemed but little

[1] Read before the Section on Clinical Medicine, Pathology, and Hygiene of the Suffolk District Medical Society, Boston, April 20, 1898.

[2] *Zeitschrift für Klinische Medicin*, 23, 1893.

[3] "Verhandlungen der Deutschen Naturforscher und Aerzte in Heidelberg," 1889; *Abth. Pathol. Anatomie*, s. 328.

[4] *Loc. cit.*

possibility of a mistake. The cases were all practically afebrile at the time of the injections. No evil results followed in any case further than the temporary reaction disturbance and the partially disabled arm for a day or two. Not a few expressed themselves as feeling improved, probably simply the contrast to the recent experience of the reaction. The glandular condition was not affected. In only one case could the reaction be said to have been excessive, and in this, after a dose of five milligrams, there was high temperature, a rapid and weak pulse, and great prostration. These symptoms, however, were but temporary. The reaction generally occurred from eight to fourteen hours after the injection and continued from twelve to thirty-six hours.

From 1 to 5 milligrams seemed to be the most satisfactory dose, and so far as our experience permitted a conclusion, was as efficient as 10 or more milligrams. It will be seen from the tabulated cases (Table I.) that out of 29, there were 18 positive reactions and 2 doubtful ones, from 62 to 69 per cent. Of the 11 cases in which reaction did not occur, in 6 the enlarged glands had only existed from 1 to 3 weeks, rather indicating that their origin was from some local irritation. The majority of the reactions occurred in cases in which the enlarged glands had existed six months or more, and this accords with the general opinion that tuberculous cervical glands are of slow growth and long duration. If, then, the tuberculin test is to be relied upon, our experience would indicate that at least 62 per cent. and probably a larger proportion of enlarged glands of the neck are tuberculous, but, of course, it requires a larger number of tests to verify this conclusion. It is interesting to note that in these 29 cases, 22 were in females; and in 17 instances the diseased glands were on the left side of the neck. These tests, so far as they go, corroborate the conclusions of others who have used tuberculin for diagnostic purposes, *viz.*, that there is no appreciable danger when the diagnostic agent is employed in moderate doses, and when there is doubt, as there always is, in a case of cervical adenitis, this test would appear to offer an easy method of settling the question as to the tuberculous or non-tuberculous nature of the glands. This settled, the question of treatment becomes more interesting and definite. Of course, I recognize the objection which will be raised: that the reaction may be caused by a tuberculous focus elsewhere, but I think it is fair to presume that it more likely to reside in the enlarged glands, other evidence failing to suggest its presence elsewhere.

Obtaining the reaction in a suspected case of cervical adenitis and considering that the diagnosis of tuberculosis is thereby established, the treatment indicated would seem to be twofold, *viz.*, general and local. The former should consist in fresh air, sunlight, abundant alimentation, good hygiene, and, in

TABLE I.—CERVICAL ADENITIS.

No.	Condition.	Duration.	Sex.	Age.	Dose in mg.	Result.
1.	Enlarged glands under right ear.	2 mos.	M.	18	1, 3, 10	No reaction.
2.			M.	6	1, 2	" "
3.	Suppurating gland in left neck.	1 mo. +	F.	10	1, 2	Reaction after 2 mg.
4.	Cervical abscess in left neck.		M.	3 mos.	1-10, 1-5	No reaction.
5.	Indurated mass under sternomastoid running up into region of the parotid. Has decayed teeth.	1 wk.	F.	40	2, 5, 10	Reaction after 10 mg. Swelling of joints of hand and feet persisting.
6.	Chronic suppurating gland in left neck.	2 yrs.	F.	23	5	Reaction.
7.	Enlarged submaxillary gland on right neck.	3-4 yrs.	F.	18	4	"
8.	Glands on right neck, one suppurating 5 months.	2 yrs.	F.	11	2	"
9.	Small glands both sides of neck, in occipital region.	3 wks.	F.		3, 5	No reaction.
10.	Mass of 6-7 glands extending from the left mastoid downward along the muscle.	10 mos.	F.	20	5	Reaction.
11.	Two glands in left neck below jaw.	3 wks.	F.	23	5, 10	Reaction after 10 mg.
12.	Two glands in left neck.	2 wks.	F.	9	3	No reaction.
13.	Suppurating glands in left neck; has had others within last two years.		F.	31	5	" "
14.	Two discrete glands under sternomastoid. Old scars from others.		M.	7	1, 3	Reaction after 3 mg.
15.	One discrete submaxillary gland.	2 wks.	F.	23	5	Reaction.
16.	Cervical submaxillary glands.	1 yr.	F.	9	4	"
17.	Glands in left neck; has had others on both sides.		M.	24	3	"
18.	Glands in occipital region.	6 wks.	F.	19	3	"
19.	Two glands in left neck.	2 wks. +	M.	14 mos.	?	Doubtful reaction.
20.	One gland in left neck.	1 wk.	F.	12	1-2, 1, 2	" "
21.	Scar from old gland in left neck.		F.	7	1, 2	No reaction.
22.	Glands in left neck; has had others.	8 mos.	F.	16	3	Reaction.
23.	One large gland below angle of left jaw; has had others.	6 yrs.	F.	14	3	"
24.	Three large fluctuating glands in left neck; has had others.	6 mos.	M.	27	5	"
25.	Glands in right neck.	8-9 yrs.	F.	21	5	"
26.	Glands in right neck.		F.	18	3	"
27.	Enlarged submaxillary gland, left side.	2 wks.	F.	19	5	No reaction.
28.	Glands in left neck and in left axilla.	2 yrs.	F.	20	3	Reaction.
29.	Enlarged submaxillary gland, left side.	1 wk.	F.	35	3	No reaction.

brief, whatever strengthens the resisting power of the individual. Although I have never been convinced that creosote has any specific action in tuberculosis, I do believe that it does raise the level of the patient's resistance and aids nutrition however this may be accomplished, and therefore I use it either alone or in connection with cod-liver oil and malt. So long as tuberculous glands exist they are always a menace to the individual, and consequently the logical treatment is their excision if this can be accomplished. Failing in this I should let them alone if they are not suppurating and devote my exertions to the general treatment. If they are suppurating, the sooner they are drained and healed the better—with the Briggs' cannula, or a seton, drainage can be expeditiously accomplished. Filling the cavity with iodoform emulsion after drainage from a small opening is also a valuable method. In a considerable experience I have never seen many, if any, favorable results from external applications. I may as well append here a series of tuberculin tests of various random cases (Table II.), made at the same time as the others, being rather of the nature of control cases, especially those of inguinal adenitis known to have had their origin in venereal infection. In the six cases of bubo, none gave a positive reaction. One of them gave what I have indicated as a probable reaction; possibly there was a tuberculous focus elsewhere if the reaction actually occurred. The results in most of the other cases corroborate the clinical diagnosis. In the three cases of pulmonary tuberculosis proved to be such by the presence of tubercle bacilli in the sputum, it will be noticed that in only one was a reaction obtained. A possible explanation of this one, in which the disease was quite extensive, may be that the system had been rendered immune by the dissemination of the disease itself. Other observers have reported a similar result in certain cases of extensive or advanced phthisis; possibly a larger dose of tuberculin than the one used—five milligrams—may have been required in this case. Where the error was, or why there was no reaction in the other case, I am unable to say.

TABLE II.—GENERAL CASES.

No.	Diagnosis.	Age.	Dose in mg.	Result.
1.	Suppurating inguinal gland.	28	5	No reaction.
2.	Suppurating inguinal gland.	34	5	" "
3.	Suppurating inguinal gland, both sides.	33	5	" "
4.	Suppurating inguinal gland, left side.		10	" "
5.	Suppurating inguinal gland.	23	5	" "
6.	Suppurating inguinal gland, right side.	42	10	Probable reaction.
7.	Enlarged gland, r. axilla.	14	3	No reaction.
8.	Enlarged glands, l. axilla.	40	3	Slight reaction.
9.	Suspected tuberculous wrist, also complains of cough and says she has spit blood.	16	1	Reaction.
10.	Indurated swelling of the right testicle, 1-month's duration; no known cause.	29	5	Reaction.
11.	Indurated swelling of the left epididymis of 3-yr's. duration.	24	5, 10	No reaction.
12.	Swelling of right wrist, possibly tuberculosis.	26	8	Reaction.
13.	Arthritis of carpometacarpal joint of r. thumb.	23	5	No reaction.
14.	Old sprain of ankle.	21	5	" "
15.	Necrosis of right thigh.	23 mos.	1	" "
16.	Chronic laryngitis; specific.	26	10	Moderate reaction.
17.	Atrophic rhinitis; pharyngitis sicca.	21	5	Reaction.
18.	Atrophic rhinitis; pharyngitis sicca.	36	5	Moderate reaction.
19.	Recent injury to side.	60	5	No reaction.
20.	Abdominal ascites, 10 months.	19	5	Doubtful reaction.
21.	Pulmonary tuberculosis, quite extensive consolidation; tubercle bacilli in sputum.	50	3, 5	No reaction.
22.	Pulmonary tuberculosis, atrophic rhinitis; tubercle bacilli in sputum.	24	5, 10	No reaction.
23.	Pulmonary tuberculosis, slight consolidation; tubercle bacilli in sputum.	24	5	Reaction.

In this series of cases also, no injurious effects or untoward results were observed from the use of the tuberculin. From the experience then, in these fifty-three cases, I have decided that it is a safe procedure and that one need not feel apprehension in its employment. Further, I believe that it is a valuable and easy diagnostic method in many and various conditions in which a suspicion of tuberculosis exists, and would commend its use. I have to acknowledge my indebtedness to those of my colleagues at the Boston Dispensary who kindly assisted me with clinical material, and also to Dr. F. W. Peare for his continued aid throughout the entire series of experiments.

ERYTHROPSIA; REPORT OF A CASE FOLLOWING AN OPERATION FOR CATARACT.

By GLENDON E. CURRY, M.D.,
OF PITTSBURG, PA.;
ASSISTANT OPHTHALMOLOGIST TO MERCY HOSPITAL.

MINOR degrees of erythropsia or red sight doubtless are more frequent than is generally supposed. The condition is usually noted in eyes which have been operated upon for cataract, and often being of but momentary duration, and developing, as a rule, after the patient has been discharged as recovered from the result of the operation, leaves but little or no doubt that in many instances this symptom is not mentioned or complained of by the patient, and thus not brought to our notice.

Erythropsia may occur subsequent to other opera-

tions upon the eye, as in iridectomy; it has also been observed in eyes which have not been subjected to operation at all, but less frequently. The development of this phenomenon usually takes place after the eyes have been exposed to some brilliant or dazzling light, and perhaps the most frequent cause in eyes which have not been operated upon is the dazzling light reflected from a large surface of fallen snow, although it may be produced by the eyes being subjected to any glaring light, as after observing a sun eclipse, or can even come on after over-heating of the body. Erythropsia produced by dazzling from snow occurs more frequently in high altitudes. In Artic regions, where there is much snow-blindness, but where the elevations are slight it is not observed. Fuchs,[1] however, demonstrated that by allowing more light to reach the retina by dilating the pupils, and then there being an exposure to snow, it would occur just as often at low altitudes as in high ones. The congestion occurring in overheating, after eating, dancing, in suppression of the menses, in anger, etc., are only predisposing factors to the development of the condition, as there must be an excessive reaction of the retina to light in addition to bring it about. Atypical forms may be present, as in an epileptic aura, or where there is an intra-ocular hemorrhage giving rise to red vision. An interesting case mentioned in history is that of Henry IV. of France. While playing chess on the eve of St. Bartholomew's massacre, the chessmen appeared red.

The onset of erythropsia is usually abrupt, the patient suddenly observing everything to be of a vivid red color, the duration of the sensation varying from a few minutes to several hours. It is quite apt to recur frequently, and apparently does no harm to the visual power of the eyes.

On January 8, 1896, I performed an operation for the extraction of a cataract from the right eye of P. C., aged sixty-eight years. The operation was the combined one, or extraction of the lens with an iridectomy. There was no accident or complications at the time of the operation, and the healing of the wound was good and prompt. About four o'clock one evening, early in March, the patient observed that everything suddenly became of a vivid red hue, and remained so until night. The next morning this phenomenon was not present, but again appeared at about four o'clock in the afternoon. Some days it was absent altogether, but appeared every three or four days at most, and always between 4 and 6 P.M. At first the color was an intense red, but gradually shaded off, becoming a lighter and lighter tint of red until about May 15th, or two and one-half months after it was first observed, it was no longer noticeable, nor has it appeared since. When the erythropsia first became manifest there was snow on the ground, and the patient had been out in the open air and his eye was exposed to the reflection of the light from the glaring surface of the snow for several hours, and this seems to have been the exciting factor in the causation of the condition. The vision in the eye equalled two-thirds ($\frac{20}{30}$) with a proper glass, and Jäger No. 1 type was read without hesitation. At no time was the acuteness of the vision interfered with by the erythropsia.

Fuchs[1] thinks the glare is the sole factor in producing erythropsia, and that the seat of the phenomenon is in the retina. Schulek[2] believes that the cause is not entirely in the retina, but in a measure in the primary brain-cells. He states that the phenomenon appears because the ultra violet centers become tired and allow an over action of the red centers, and defines erythropsia as a regenerative condition of the red-green sight substance caused by photochemical irritation, which has created a condition of exhaustion in the brain-cells.

Another theory advanced, by whom I am unable to recall, is that erythropsia is caused by the active regeneration of the visual purple under the influence of a strong light stimulus. Certainly the glare is largely concerned in bringing about the condition, as it is scarcely ever observed where glare is absent, and is of comparatively frequent occurrence where people are obliged to travel over fields of snow. It has been noted in many cases that the point of fixation, corresponding to the macula, does not appear red, and when at all only after there has been exceedingly strong excitation. The cones of the layer of rods and cones of the retina cannot be the seat of the phenomenon in such instances, as they do not contain the visual purple, and the rods, which alone possess this substance, do not exist in the macula. If we accept this theory, a strong light stimulus acting upon the rods (as they alone contain the visual purple) inducing an active regeneration or excess of formation of the visual purple, is probably the principal etiologic factor in erythropsia. Dr. Greef[3] of Berlin reported a case of erythropsia in which the patient could only distinguish between red and black. No other color was perceived. Here other factors were probably concerned in the etiology.

The salient features of the case reported were the appearance of the erythropsia following an exposure to the glare arising from a large surface of snow; it was more intensely red at first, gradually fading, and ultimately disappearing entirely; it was always manifest at about the same hour, and it occurred in an aphakic eye. For some days before and after the appearance of this red sight the ground was cov-

[1] Graefe's "Archivs," vol. xlii, October, 1896.

[1] *Annales Oculistique*, 1895.
[2] *Ungar. Beitr. z. Augenheilk.*, 1, 1895.
[3] Ophthalmological Society of Heidelberg, 1895.

ered with snow, and the patient was out more or less each day, and not protecting his eyes specially from the dazzling reflection from the glaring surface of snow, and the fact that the eye was a post-operative one, more light reaching the retina through the coloboma than was usual, leads me to conclude that these were the only factors concerned, in this instance, in bringing about the condition.

NON-MALIGNANT STRICTURE OF THE RECTUM.[1]

BY A. E. HALSTEAD, M.D.,
OF CHICAGO;
PROFESSOR OF RECTAL SURGERY IN THE CHICAGO POLYCLINIC; INSTRUCTOR IN THE PRINCIPLES OF SURGERY AND CLINICAL SURGERY IN THE NORTHWESTERN UNIVERSITY MEDICAL SCHOOL OF CHICAGO.

A NON-MALIGNANT stricture of the rectum may be defined as a pathologic condition in which there is a progressive narrowing of the rectal canal following a loss of tissue, the result of ulceration or of trauma, and the subsequent contraction of the inflammatory tissue. As causes of the local conditions producing rectal stenosis we have syphilis, trauma, simple ulceration, gonorrheal and chancroidal ulcers, dysentery, phlegmonous proctitis, and tuberculosis as active factors. Syphilis is the most frequent cause, and one-third of all cases may be attributed to it. Curling in twenty cases of stricture found nine which he ascribed to obstetric trauma. Strictures have followed operations for hemorrhoids, fistula, and prolapsus recti. Cripps in seventy cases found one of tubercular origin. In the "Medical and Surgical History of the Rebellion" there is not a single case recorded in which stricture followed dysentery.

Stricture is more common in the female than in the male sex, in the ratio of three to one. Penet studied post-mortem the location of stricture in fifty-eight cases, and found them situated at the following distances: Commenced at the anus in four, below 6 cm. (2½ inches) in thirty-two, at 6 cm. in three, between 6 and 9 cm. (3⅜ inches) in seven, above 9 cm. in five, and at the junction of the rectum and colon in five.

The symptom first noticed is constipation alternating with diarrhea, or the discharge of bloody mucus. Vomiting, anorexia, and emaciation, accompanied by hectic fever, with headache and vesical disturbances, are among the later symptoms; acute and complete obstruction is rare, the patient generally dying from exhaustion or some intercurrent disease before this occurs. A positive diagnosis can only be made after a local examination. Treatment may be by dilatation, electrolysis, internal and external proctotomy, inguinal or lumbar anus, plastic operations, anastomosis, and excision, perineal or sacral. The treatment by perineal excision or resection, after Dieffenbach and Volkman, or as Van Hook has termed it, modified amputation of the rectum, is the best method of treating non-malignant rectal strictures which are not situated above the peritoneal level.

As an argument in favor of the superiority of this method, and as a means of describing the technic, I report two cases of rectal stricture in which permanent cures were attained by amputation of the strictured portion of the gut.

CASE I.—Mrs. A. J. B., aged thirty years. Nativity, Irish. Was admitted to the Cook County Hospital, March 28, 1895. Family history negative; married ten years. Seven years before she had a premature labor; not been pregnant since. Shortly after marriage she contracted some kind of "blood" disease, which caused loss of hair and a cutaneous eruption, for which she was treated two months. About six years before admission to the hospital she began to have symptoms of rectal disease. At first she noticed a bloody purulent discharge from the bowel associated with considerable pain and tenesmus on defecation. About one year after the appearance of the first symptom she became aware of increasing difficulty in having a bowel movement. At the time I saw her her bowels moved about once a week, and then only after repeated efforts. At such times a large quantity of fluid feces, blood, and pus was discharged. About one year before a fistula had opened on the buttock at the left of the anus.

The patient was greatly emaciated, pallid, and very weak. Numerous copper-colored scars were distributed over the body; lymphatic glands moderately enlarged; heart and lungs negative; abdomen distended. Patient complained of constant pain over the whole abdomen, and marked tenderness in the right iliac fossa.

Rectal examination showed a large ulcer just above the anus mostly on the posterior surface of the gut. Above the ulcerated area, at a distance of 1½ inches from the anus, was a circular constriction, which would just admit the tip of the finger, but through which the finger could not be forced. On examination with a sound it was found that a No. 28 (French) urethral sound would just pass through the strictured portion of the gut. On vaginal examination, the upper limit of the stricture could be felt, which showed it to be of the annular variety, about one inch in length. One inch to the left, and a little behind the anus, there was a fistulous opening from which was discharged bloody pus. A sound passed into this fistula apparently passed into the rectum above the stricture, and could be felt through the recto-vaginal septum.

A few days after admission an incision was made, laying open the fistulous tract, and completely dividing the stricture and posterior wall of the rec-

[1] Read before the Illinois State Medical Society.

tum. The sinus was then thoroughly scraped with a sharp curette, the bowel washed out with sterile water and the wound packed with iodoform gauze. Rapid improvement in the patient's general condition immediately followed, the pain disappeared, the appetite improved, and the temperature became normal within a few days. At the end of six weeks a radical operation was attempted. The wound had almost healed by granulation, and ulceration had nearly disappeared. The patient was placed in the exaggerated lithotomy position and the part exposed by stretching the sphincter, which, of course, reopened the wound in the posterior rectal wall. The rectum was then denuded of its mucous membrane from the mucocutaneous junction to the lower limits of the stricture. This dissection was carefully made so as to avoid injuring the underlying sphincter. The hemorrhage at this stage was profuse, but was easily controlled by pressure and hemostatic forceps. The rectal wall was now divided throughout its entire circumference at the lower limit of the stricture, and by careful dissection the entire cicatricial mass was separated from the surrounding tissue. During the process of separation traction was made on the strictured portion of the gut, so that when the mass was entirely free it protruded beyond the anus. The rectum was then amputated just above the stricture, and the cut end attached to the skin, first by three deep sutures, and then by a row of superficial intermediate sutures. A rubber tube six inches in length and three-fourths of an inch in diameter, wrapped in iodoform gauze, was introduced into the rectum, while gauze drainage was placed in the wound and an ordinary antiseptic dressing applied. The after-treatment consisted in frequent change of dressings, liquid diet, and keeping the bowels inactive for one week. The patient left the hospital about six weeks after the operation, apparently in perfect health. Twenty-one months after the operation she was still enjoying good health without any return of the stricture, and with excellent control of the sphincters.

CASE II.—Mrs. E. J. S., American, aged thirty-four years; married. Consulted me in January, 1894. Family history negative. Married fourteen years; had had two children, the elder being twelve and the younger ten years of age. Venereal disease denied; never had any illness excepting that which followed last confinement, and which was said to have been puerperal fever Present illness began about three years before, with pain and tenesmus on defecation, accompanied at times by discharge of large quantities of pus and mucus. Constipation gradually became more and more troublesome, until only by the constant use of cathartics could the bowels be moved. One year after the first symptoms were noted she consulted a physician who recognized the condition and treated her for nearly a year, by passing graduated bougies. Under this treatment, and with careful regulation of the bowels and diet, she improved. At the end of this time she went to reside on a farm where she could not get proper treatment. Her condition rapidly grew worse, all the old symptoms returning in an exaggerated form. At the time that I made the first examination she appeared greatly emaciated and very weak. The skin was somewhat jaundiced and the tongue heavily coated; pulse was accelerated; the temperature slightly above the normal. The abdomen was greatly distended and somewhat tender on pressure. Rectal examination showed an annular stricture beginning about 1¾ inches above the anus, and involving as near as could be determined, by vaginal examination, about 1¼ inches of the bowel. The stricture barely admitted the tip of the examining finger. Treatment by gradual dilatation was immediately employed. This, with regulation of the bowels and diet, again produced marked improvement. After six months of treatment, the patient unfortunately was forced to leave the city. During an absence of four months, all treatment was discontinued, with the result of a return of the symptoms. At the end of this time, on returning to the city, she readily consented to an operation, with the hope of having permanent relief. In October, 1894, I operated, removing the strictured portion of the gut, as in the case above reported. This was followed by complete recovery. When last seen, one year and three months after the operation, there were no signs of a return of the stricture, nor had she any inconvenience.

DIABETES MELLITUS.

By H. G. NORTON, M.D.,
OF TRENTON, N. J.;
VISITING PHYSICIAN TO ST. FRANCIS AND MERCER HOSPITALS.

IT seems to me that diabetes is on the increase. Just why I am unable to say; possibly the great amount of sugar and starch consumed may account for it. The following nine cases now under my care would seem to indicate that the disease is abroad, if looked for. I cannot recall a time when I have not had some cases, but never so many as now. I do not believe as many cases are met in the country as among city dwellers. I make it a habit to examine the urine of nearly every patient under my care, which may account for the number of diabetics now among my patients. I am certain of my tests and my solutions. Usually I permit the specimen to be examined to stand twelve hours or more to allow any uric acid to settle, using the upper strata for examination. A drop of muriatic acid added to the urine will more quickly precipitate the uric acid. When the urine is scanty and high-colored, according to Tyson, it is always best to eliminate this source of error by adding hydrochloric acid, making sure that the urine is again made alkaline before being tested.

CASE I.—Female, stout, single, aged sixty-five years. In good circumstances. Always a very careful and proper liver. Is losing flesh, her hair is falling out, and she shows signs of general impairment of health. Is not very careful as to her diet,

and is not holding her own She has pruritus vulvæ at times.

CASE II.—Female, stout, married, aged seventy-five years; mother of five children. Is in good circumstances. A full feeder. I was led to examine this patient's urine because of a history of ineffectual attempts to cure an obstinate attack of pruritus vulvæ. Careful dieting soon removed the intolerable itching, and she is doing well on a moderately strict diet.

CASE III.—Female, Hebrew, stout, married, aged forty-five years; has had one child. Is in good circumstances. Dieting and treatment do not diminish the amount of sugar much, but she is not losing weight.

CASE IV.—Male, colored; a clergyman; medium weight; married; aged forty-five years. In good circumstances. Has extreme thirst and polyuria.

CASE V.—Male, stout, married, aged fifty-six years. In good circumstances and a free liver. Has lost seventy pounds since last spring. Strict dieting has nearly removed the sugar from his urine, and he is gaining in flesh. I have allowed him to gradually resume his usual diet, except sugar, sugary fruits, and grapes.

CASE VI.—Male, stout, married, aged sixty years; saloon-keeper. In good circumstances, free liver, and moderate drinker. Has eczema of legs, itching, and soreness of glans penis and prepuce, accompanied by great thirst. He is always improved by dieting.

CASE VII.—Male, stout, married, wealthy; aged sixty-five years. Has had but little treatment, and is holding his own.

CASE VIII.—Female, stout, married, aged thirty-three years. Mother of four children. In good circumstances. Found sugar in her urine during her last pregnancy, which she passed through uneventfully, except that her getting up was slow. Neither dieting nor the termination of pregnancy have removed the sugar.

CASE IX.—Male, stout, married, aged forty-five years. Has lost flesh. Dieting and treatment do not remove the sugar, but improve his general health.

Analysis of these cases shows five men and four women, all stout or inclined to stoutness, except the negro, all among the well-to-do, and free livers, none being of dissipated habits. My patients usually soon tire of a strict antidiabetic diet, and I find the various diabetic flours to be a poor substitute for ordinary wheat flour. As to treatment, I find that Fowler's solution and codein give me the best results, together with tonics, such as muriatic acid, strychnin, and quinin, as indicated. Some patients are glad to use saccharin, while others dislike it.

Among the diabetic patients formerly under my care was one boy, six years old, who died after a brief illness, no remedy or dieting seeming to have the slightest influence on his disease. He rapidly passed into a comatose condition and died. His mother was an extremely neurotic woman, who died of consumption afterward.

I have amputated the limbs of several patients for diabetic gangrene, nearly always with fatal results. I recall these cases: (1) Amputation of leg at lower third for gangrene of foot; died. (2) Amputated arm at middle third for gangrene of hand; died. (3) Negro; amputated leg above knee for gangrene of foot; recovered. (4) Negro; amputated toe for gangrene; recovered. After two or three years he returned with gangrene of the other toes and a deep ulcer over the external malleolus. His condition did not then seem to warrant an amputation, and he died a few days later.

WAR ARTICLES.

NEWS OF THE WEEK.

THE terrible loss sustained by the American forces in the recent battles before Santiago inclines one to wonder if the result would not have been different had General Shafter but waited, as it was expected he would do, for the reinforcements now on the way, and for additional artillery. According to the latest despatch as we go to press, "There is but little sickness outside of exhaustion from the intense heat and the exertion of the battle. The behavior of the troops was magnificent," but a thousand men were either killed or wounded! It is fortunate that the hospital ship "Relief" will so soon be at hand to assist the "Solace" and "State of Texas" in transporting the wounded to the well-equipped military hospitals in Florida, for even with the attendance of the Red Cross and other nurses, a seriously wounded soldier, with the prospect of a long illness before him, would have to battle against strong odds in the enervating climate of Cuba, no matter how favorable his surroundings might otherwise be.

. . . . . .

It is not generally known that the "Relief" is a medical and surgical supply-ship as well as a hospital ship. Her ice-manufacturing plant will produce two tons of ice per day, and with her distilling apparatus she can turn out 1500 gallons of pure water per day. In her sick wards she has 360 beds, but in addition carries 750 folding cots and 650 extra mattresses, so that almost any requisition from the field surgeons in Cuba can be filled without delay. Her supply of delicacies, wines, medicines, dressings, etc., is most abundant, and almost entirely made up by voluntary offerings from patriotic citizens in all parts of the country.

. . . . . .

The experience of our soldiers in the tropical cli-

mate of Cuba has necessitated a modification of Artemus Ward's graphic description of a hot-weather costume. Instead of "a shirt collar and a pair of spurs," which Artemus, if we remember rightly, recommended as a comfortable Kentucky outfit, our boys are reported as fighting valiantly in "a cartridge-belt, a chew of tobacco, and a smile." Flannel coats, blankets, etc., were dropped along the line of march, as their burden became utterly insupportable, and were promptly appropriated by the insurgents, the majority of whom are in rags, and who will doubtless find some way of saving the warm clothing for the cold season.

. . . . . .

The hot, humid weather of the past week, as experienced so generally throughout the United States, gave us just a sample of what our men are enduring at Santiago, and the light canvas suits, weighing about three pounds each, which have already been sent to them, will be a most timely and welcome relief. Twenty-four thousand of these lightweight canvas uniforms are already well on their way to the Army of Invasion.

. . . . . .

So far the elements have been with us. The dreaded rainy season has held off to such a degree that our men have kept in good condition, with very few exceptions. Our lucky star guided Admiral Cervera into Santiago harbor, and as a result the Army of Invasion was sent to the hill country in this neighborhood where the air and soil are infinitely more healthy and endurable to our Northern-bred men than the swampy lowlands surrounding Havana, where a month ago it was supposed the first United States camps on Cuban soil would be located.

. . . . . .

Our Board of Strategy seems so destined to make plans which unexpected circumstances cause to gang aft-agley, that it now appears only to be necessary for our Army and Navy to stand ready to take advantage of the blunders of the enemy.

. . . . . .

At the present writing Admiral Camara's pleasure trip with the Cadiz squadron has extended to the Suez Canal, and he is evidently pausing to mark the effect of his "bluff." Camara will surely go down in history hand in hand with that doughty warrior who "marched his soldiers up a hill and then marched them down again."

. . . . . .

And now the International Temperance Congress just assembled at Prohibition Park, Staten Island, suggests that candy or other sweetmeats and cake should not be sent to the soldiers because they are apt to produce a thirst, which may possibly be quenched by intoxicating drinks! We speak from slight experience, but we have always thought that a thirst engendered by eating sweets called for water, and water only.

. . . . . .

A welcome addition to the soldier's outfit will be the mosquito-proof tents which are to be sent to Cuba, Puerto Rico, and Manila. The tent is a small affair, made of fine, white cheese-cloth, may be readily carried in a knapsack, and weighs one and one-half pounds. When opened it is five feet high, six feet long, and three feet wide. It affords ample protection against mosquitoes, flies, insects of all kinds, and dew.

THE WOUNDED OF "ROOSEVELT'S ROUGH RIDERS."

FLAGSHIP "NEW YORK,"
OFF SANTIAGO, CUBA, June 30, 1898.

ON June 24th the Rough Riders were sent out ahead on scout duty on the advance of the army upon Santiago. The country is very hilly and is covered with brush, and is almost impassible in places. Suddenly the Americans were made aware of the presence of the enemy by a fierce musketry volley that came from an ambuscade. Our men immediately fell flat on the ground and began to fight in Indian fashion, shooting only when they saw a Spaniard. The enemy fired at random, and, as one of the Riders said, if we had been hit as often with bullets as we were with leaves there would have been nothing left of us.

The Americans, although outnumbered, advanced steadily, going forward by short dashes when the opportunity offered, then falling flat on the ground to fight again. The wounded, such as were able, were told to walk to the camp at Siboney, a distance of four miles. When they arrived there the first seven were sent to the U. S. S. "St. Louis" for treatment. One man had been struck three times, once in the neck by a lead bullet, which was removed, the second and third wounds having been produced by Mauser bullets, one passing through the muscular tissues of the left forearm, the other entering his body near the coccyx, and passing through the gluteal muscles. Neither of these wounds presented laceration, but were of the simple punctured variety, the wound of exit being larger than the wound of entrance. There was considerable laceration in the neck wound.

Another man was shot, probably by a forty-five-caliber brass-jacketed lead bullet through the back of the right forearm. There was considerable lacera-

tion of muscles and tendons, and a small piece of the radius was chipped off. The wound was large and gaping. The parts were trimmed up, the muscles and tendons sewed together, and the wound closed without drainage, the arm being placed on a splint.

The most interesting case from a surgical point of view was that of a man who was shot by a Mauser. He was struck as he was making a dash forward. The ball entered the dorsal aspect of his penis just to the right of the base of the glans, proceeded backward and to the left, injuring the lower portion of the urethra, then entered the superior portion of the scrotum, went downward through the left testicle and out of the scrotum on its inferior surface and grazed the inner side of his left thigh. This man had walked four miles after receiving the wound. When he arrived on board the "St. Louis" he was placed on the operating-table. As his penis was very much swollen and black from effused blood, as was also the scrotum, and as he had a marked phimosis, a circumcision was performed and his urine drawn with a metal catheter. The catheter could be felt with a probe through the bullet wound and fluid injected into the meatus ran out of the lower wound, showing that the urethra had been partly severed. The urethra was distended with a number twenty-six French bougie and its floor repaired with a double row of sutures. A soft rubber catheter was left in the bladder and the scrotal wounds drained with iodoform gauze. This patient also had two punctured wounds of the forearm, neither of which showed any laceration.

One man received a Mauser bullet through his left ring finger. The ball knocked a little piece of bone off of the second phalanx and cut the skin and tissues on the side of the digit. There was one punctured wound of the soft parts over the scapula and another punctured wound of the soft parts of an arm. Both were produced by Mauser bullets and neither showed any laceration. Some of the injured men said that when they were hit it felt as if they had been stuck with a pin; others said they felt nothing and only became aware of their wounds by seeing blood. The range at which all these injuries were received was very short, probably between fifty and one hundred yards, yet contrary to expectation there was no lacerating effect produced by the Mauser bullet.

One of the first questions asked by almost every one of the wounded Riders was, "Doctor when will I be able to get into it again?" All seemed anxious to get back to their companies. None murmured when their wounds were being dressed, and all refused whisky when it was offered to them. When the Spaniards realize what plucky men they are fighting against they will talk less and think more.

RAYMOND SPEAR, M.D.,
Assistant Surgeon, United States Navy.

DISEASES COMMON TO THE PHILIPPINES: KAKKE, OR BERIBERI; DYSENTERY. POISONOUS SNAKES. MANILA IN TIME OF PEACE.

[From Our Special Correspondent.]

With Commodore Dewey's Squadron off Manila, Philippine Islands, May 15, 1898.

BY the time this reaches you the details of the battle of Cavité will have been fully reported by the daily press in America, and therefore I need not spend time in giving you an account of our inconsiderable casualties. Since the memorable events of May 1st, Commodore Dewey's squadron has been to a great extent inactive, the only occurrences of importance having been the occupation of Cavité by the marines, the occasional despatch of one of the ships to intercept a suspected blockade-runner, and the exchange of courtesies with a foreign war-vessel. The "McCullough" is expected hourly from Hong-Kong with dispatches from Washington and I hope to be able to send this letter by her on her return trip. Naturally there is not much to write about under the circumstances, but it occurs to me that a few words about Manila and the Philippines in time of peace may prove of interest.

It is very hot here, but the men are all in buoyant spirits and speculation is rife among them as to what the next move is to be, and whether reinforcements will arrive before the final attack is made on Manila. The health of the crews continues good, but while the American soldiers in their occupation of the Philippines will not be subject to the danger of yellow fever which threatens the army in Cuba, there are other diseases prevalent in Manila and vicinity worthy of consideration. The population of the city of Manila with its outlying wards is only about 250,000, yet the average number of inmates in the leper house is two hundred, and there are other lazarettos in different parts of the island. Two severe epidemics of cholera have visited the city during the last century, one in 1820 and another in 1858; but the danger of another outbreak of the disease in the immediate future is too remote to be considered. Dysentery, which is so deadly in some of the islands of this group, is less frequent and less virulent in character in Manila and other parts of the island of Luzon, though many deaths occur from it every year. The flannel bandage over the abdomen, habitually worn by the British soldiers in the tropics, and by many other Europeans here, is a

great preventive of dysentery and other intestinal disorders. One of the principal causes of the disease in this climate is bad water; but since about the year 1884 Manila has had good drinking-water, though the European doctors often insist on its being boiled.

During the rainy season, which begins about the first of July and lasts until the end of October, there are many cases of malarial and other fevers, and a form of malaria closely resembling typhoid is quite common in the city, especially at the beginning of the rainy season; but the marshy country around Manila is comparatively free from it. Epidemics of smallpox and measles are of almost yearly occurrence, and there are many deaths from the former though the latter is comparatively mild.

Among the native and Spanish troops syphilis is shockingly prevalent. In the military hospitals about twenty per cent. of the inmates are generally found to be suffering from this disease. Tuberculosis and bronchitis are very common among the natives, and in the military hospital in Manila a great many cases are always to be found. It has been asserted that seventy-five per cent. of the native troops in the hospital have one or the other of these diseases.

There is a peculiar disease often met with in the Philippine Islands, and also in China and Japan. The Japanese call it *kakké*, and from the ancient writings of Chinese physicians it appears to have existed in that country for centuries. It is commonly known as beriberi, and its victims are generally men between twenty and thirty years of age. It attacks both sexes, but women are much less susceptible to it than men. It is essentially a nervous disease, a neuritis, a kind of muscular paresis, and its symptoms are very puzzling to the novice. At different times it has been diagnosed as muscular rheumatism, locomotor ataxia, heart disease, Bright's disease, etc. There have been several epidemics of beriberi in the jail at Hong Kong, and it sometimes attacks British soldiers in these latitudes. Occasionally an isolated case is found aboard ship, and epidemics are not uncommon. Its victims are particularly liable to sudden death from paralysis of the heart, or of the muscles of respiration, edema of the lungs, or a combination of these conditions. Its most prominent symptoms are numbness of the feet, legs, and finger-tips, weakness of the muscles, difficulty in breathing, and palpitation of the heart. There are often painful cramps in the muscles of the calf and thigh. An attack is generally preceded by a period of restlessness and inability to perform customary work. The legs and knees of the patient are weak and he frequently has headache and chills. The face may become puffy and bloated and there may be other dropsical symptoms. He may suffer from these symptoms off and on for several weeks before becoming positively ill. With all the conflicting symptoms of this many-sided disease there are two which are never absent: numbness of the shins, and tenderness of the calves of the legs. The numbness often extends to the thigh and is felt in the arms and hands, especially in the finger-tips. If the case is severe, in a few days the patient may be unable to move about. The senses of sight, hearing, taste, and smell are generally unaffected, though the patient is incapaciated for any mental effort. There are two forms of beriberi, the dry and the wet. In the case of the former there is great emaciation, and often in an incredibly short time the body of the sufferer is reduced almost to a skeleton; in the case of the latter, the body is swollen and looks like one that has been several days in the water. Beriberi generally attacks its victims in the wet or hot weather; in the cold season it is practically unknown. It sometimes becomes chronic, returning periodically with the hot weather. After partial recovery, the muscles of the calf are sometimes shortened, so that the patient walks on his toes. Beriberi is generally recognized as a germ disease, but practically nothing is known of the germ itself. It is supposed to be indigenous to certain soils, as it exists only in particular localities, though this fact has not been positively established.

There is a strange affection which appears among the cattle of these islands. It is said by the natives that the internal organs of an animal affected by this disease turn to blood, and in an epidemic which occurred a few years ago one man lost eighty-five per cent. of his live stock. Personally I have not seen a case of this peculiar complaint, nor do I for the moment remember its name.

The European residents here complain of a tendency to scruff, which develops after a short stay in this climate, but they are generally loth to adopt the national preventive. In the forests of Luzon are a great many monkeys, and there is a belief among the natives that stewed monkey is an unfailing cure for all cutaneous diseases. To the stranger in these islands the idea of eating monkey-flesh may be very revolting, but there are few dishes more delicate than the young monkey stuffed and baked, though it does look very much like a small brown baby.

The cities, as well as the jungles, abound in insects, reptiles, snakes, frogs and lizards, land crabs, centipedes, tarantulas, huge poisonous spiders, locusts, beetles, and ants. Of all the snakes the ones most dreaded are those the natives call the *alupong*

and the *daghong-palay*. The bite of either of these is fatal if not cauterized immediately. The *daghong-palay* is found in the deep mud of rice-fields, and among the tall rice-blades. Every pool of stagnant water is alive with leeches, and in the forests there is a tiny leech which has a disagreeable habit of unexpectedly jumping into one's eyes. Swarms of ants are found everywhere. Some of them are the size of a pinhead, others are half an inch long, and they are so destructive that sometimes whole warehouses have to be torn down because of their inroads. They can eat through any wood except the very hardest.

In the Philippine rivers are huge caymans that are very cruel and bloodthirsty. The natives fear them so much that in cursing an enemy they say, "May the cayman kill him!" and there is a superstition among them that if they swear falsely, or break their promises, the cayman will kill them, and they can always cite instances in which this fate has happened to wrong-doers. In Manila mosquitoes are very troublesome; but there are few crawling insects about, for the reason that they are destroyed by the newt and a species of lizard called *chacon*. The newt is a strange little reptile, and if one is caught by the tail he shakes it off and runs away without it. At night huge bats fly about overhead, and these nocturnal visitors inspire the greatest horror in one who does not know what they are; for they often measure five feet from tip to tip of their wings. Bat-shooting is considered fine sport among the young men in the Philippines, and those who were compelled to stay long in Manila in antebellum days were glad of any form of amusement, for ordinarily it is a dull city, though the girls are said to be the most beautiful in the world. There are no popular cafés, no opera house, and absolutely no place of recreation. Not until 1887 were there any gardens in the public squares. The streets are narrow and badly lighted by petroleum lamps, and in the suburbs cocoanut oil is sometimes used for that purpose. The paving is wretched, and during the wet season it is almost impossible to get about. In the wards occupied principally by the poorest working-classes, huts with thatched roofs are still constructed, and the only drainage in this part of the city is by ditches cut around each square. In the wet season this district is a mass of pollution, many of the huts having pools of stagnant water under them for months. When the rains stop and evaporation commences, fever breaks out among these wretched people and many of them die.

Down in the city itself the conditions are somewhat better, and a foreigner could make himself fairly comfortable, for there are several Spanish hotels where the fare used to be decent, but the beds and other accommodations are very bad. Very few of the houses have more than the ground story and one upper floor. The former is so damp that it is used generally for lodging the native servants and for a coach house. Manila is not a place that would be chosen as a residence by a person looking for pleasure and comfort. The climate is very trying, except for about four months in the year, and a typhoon comes along occasionally and makes things lively for awhile. Manila's population of 250,000 is composed about as follows: Sixty-seven per cent. pure natives, thirty per cent. Chinese and Chinese half-breeds, and three per cent. Spanish and a few other Europeans. It is within the last hundred years that the Spanish soldiers were so badly and irregularly paid that they used to go begging from house to house about the city. I presume from present indications that before this letter reaches you, if Commodore Dewey continues to maintain the blockade in the present effective way, the officers and even the Governor-General will become accomplished mendicants as well. The entire male population over sixteen years of age are compelled to carry arms and consider themselves in the military service. There is a medical board, composed of European Spaniards, that has general supervision over the troops. The military hospitals are subject to the authority of this board, which nominates an officer to each of the regiments. This officer is called an *agudante*.

In America we often hear doctors complain of the fierceness of competition among the members of the medical profession, but in Manila there is a mob of third-rate native doctors who manage somehow to eke out a poor existence. They are mostly sons of ambitious natives who are anxious to see their children launched in the "learned professions."

It is to be hoped that whoever has charge of the commissary department of the American army will avoid tinned provisions and use fresh food whenever possible, for in this climate tinned meats spoil very soon and the cans become bulged, which shows that the contents are not fit to eat. Foreign residents in Manila generally find the meat of indifferent quality; but poultry in times of peace is cheap and plentiful. Cocoa is a much better tropical drink than either tea or coffee. Fruit is plentiful here and wholesome, if eaten in moderation; but the old adage, "fruit is gold in the morning, silver at noon, but lead at night," is particularly applicable to those who live in hot climates. There are many tempting-looking fruits and berries growing in these islands that are very poisonous, and one is never safe in eating unfamiliar fruits.

It takes some time for the American to become acclimated in the Philippines, and the United States

soldiers will find conditions here very different from anything to which they have been accustomed in the United States. Many cases of sunstroke among the troops are to be expected and they may find it hard at first to restrain their Yankee activity; but the tendency to indolence is drawn in with every breath of this enervating air.

There seems to be no reason why the American soldiers, if they come to the Philippines, should not be practically free from serious illness, as the bugbear of tropical disease can generally be avoided by a reasonable regard for the laws of health and observation of recognized sanitary precautions. If the American soldiers and marines feel dissatisfied with plain fare, which is the only proper and safe fare in this climate, they should remember that the battle of Cavité was won on a breakfast of hardtack and coffee.

THE MORBIDITY OF THE UNITED STATES FORCES FOR THE FIRST CALENDAR MONTH IN THE FIELD AT TAMPA, FLA.

By HENRY I. RAYMOND, M.D.,
CAPTAIN AND ASSISTANT-SURGEON, UNITED STATES ARMY.

I HAVE thought it would not only be of interest to statistically review the diseases affecting 10,000 regular troops during their first calendar month in the field at Tampa, but also to use this review as a basis of comparison for the morbidity that will be revealed during their first month of foreign invasion or occupation; or, perchance, for comparison with the morbidity of an equal number of volunteer troops.

The mean strength upon which the following statistics are based include 477 officers, 7978 enlisted men (white), and 1666 enlisted men (colored), or a total of 10,121. The number of days lost to the Government from sickness was 5120, or proportionally about one-half a day for each individual soldier included in the mean strength of the command.

There were ten cases of discharge on surgeon's certificate of disability, or one-tenth of one per cent. The causes of discharge were, chiefly, epilepsy, gonorrheal epididymitis, and ulcers from varicose veins, and one case of mild insanity was sent to the Government Insane Asylum at Washington.

Of course, epilepsy and insanity are conditions incompatible with the responsible duties of the soldier, and the other conditions above mentioned impede a soldier's locomotion and paralyze his efficiency, for, as declared by a contemporary of Frederick the Great, and as substantiated by the experience of military commanders since his time, the efficacy of a fighting force depends largely upon the power of marching, or (to paraphrase it) on the strength of the legs. Add to this an adequate lung capacity (in which resides the staying powers of the individual), and we approximate very closely to the physically ideal soldier.

It is due to this weeding out process and to the careful recruitment of the past three years that such a splendid spectacle of physical symmetry and proportion was presented to the eye of the spectator when in brigade maneuvers on Tampa Heights a brigade of more than 2000 men was formed in line of battalions closed in mass.

Out of a numerical strength of 10,121 there were 1294 admissions to sick report during the month, or about one-eighth of the entire force presented itself before the medical officer with diseases sufficiently serious to disable for active duty for a longer or shorter period, averaging for the month, as above stated, the loss of about one-half a day to the Government for each individual included in the mean strength of the command, or about four days for each man admitted to sick report.

Among the cases admitted it must be noted that seventy-four were simple vaccinia, or temporary induration with tenderness at the site of vaccination, inoculation with vaccine lymph being practised to a considerable extent on the troops in the field. The most frequent cause for admission, however, was diarrhea, there being 556 cases of this complaint out of the 1427 cases of disease accounted for in the consolidated report for the month, covering 133 cases remaining from the previous month, and 1294 cases admitted during the current month. Whatever may have been the causes of these diarrheas, and they have been variously attributed to heat, to marked diurnal variations of temperature, to indiscretions of diet or cold drinks when the soldier was overheated, to sleeping upon the ground, etc., it was noted by me that as soon as the men were placed upon the transports these catarrhal conditions of the intestinal canal tended rapidly to disappear, and the opposite condition—one of relative constipation—set in. But, again, the consolidated report shows but six cases of alcoholism during the month. Think of it! But six cases of alcoholism among 10,000 soldiers for thirty days on an active campaign! Can the municipal records of a town of that size in an average community vie with that report? Under my personal observation in Tampa and vicinity during the past six weeks there have come but two or three cases of drunkenness, and no case of beastly intoxication. Beer has been consumed, but only in moderation, and the soldiers have largely resorted to non-alcoholic drinks.

There have been 36 cases of heat exhaustion, but all of them mild, and promptly relieved by the plentiful use of cold water to the head and forearms, and there have been 80 cases of wounds (not gunshot), usually slight, and 77 cases of contusions and sprains, also slight or insignificant, as a rule, together with 30 cases of abscess or localized pus formations, such as otorrhea, whitlows, and the like, and also 27 boils, occurring chiefly in cavalrymen. But 7 cases of typhoid fever are recorded, although among the 33 cases classified as "not diagnosticated," there were doubtless a number of typhoid cases transferred to Divisional Hospitals before the diagnosis had been established. One surgeon reports two cases of gonorrheal ophthalmia, and states that they were undoubtedly innocently contracted owing to concealment and lack of precautions on the part of one or two individuals who were found to suffer from a specific urethral discharge.

An inspection of companies was made in the appearance of the second case, and a thorough investigation of the command in which the disease appeared, together with a word of advice, stopped further infection.

The 1427 cases of disease and injury in the consolidated report are classified under fifty-four headings. Those most frequently encountered, and in the order of their frequency, appear in the following list:

Diarrhea, 556 cases; wounds (not gunshot), 80 cases; contusions and sprains, 77 cases; vaccinia, 74 cases; malarial intermittents, 54 cases; rheumatism, muscular, 48 cases; heat exhaustion, 36 cases; gonorrhea, 34 cases; simple abscess, 30 cases; dyspepsia, acute, 27 cases; boils, 27 cases; skin affections, 25 cases; bronchitis, acute, 25 cases; intestinal colic, 24 cases; chancroids, 19 cases; hemorrhoids, 18 cases; measles, 11 cases; syphilis, 10 cases; gunshot wounds, 5 cases; appendicitis, catarrhal, acute, 1 case.

The daily average sick of the command was only two-tenths of one per cent. No death was reported. These statistics refer only to regular troops, but one report of sick and wounded having been received from volunteer regimental surgeons up to the date of consolidation. It is expected, of course, that the sick of the volunteer commands will figure in subsequent consolidated reports. The troops are now in Cuba, but the vigilance of the sanitary officers of the command cannot be relaxed. During the first night on the transport "Saratoga," to which I was attached, provision had to be made for accommodating as many enlisted men as possible on the cabin decks, while very few were allowed to remain below, where the temperature was over 100° F., and proper ventilation impracticable while the transport was detained at the dock for loading.

Daily cleansing of the decks and policing of the vessel, and thorough and frequent flushing of water-closets, and other sanitary precautions were promptly inaugurated as preventive measures against sickness.

As the "Saratoga" was about to swing from her moorings for a cruise around the bay in search of a breath of fresh sea air, your correspondent was detached from the vessel by a War Department order, directing him to report at Chickamauga National Park, and he had, therefore, to forego the distinction of accompanying the first Army of Invasion upon Cuban soil.

THE ADVANTAGES OF THE CAMP AT CHICKAMAUGA—HARD WORK FOR THE RECRUITS—REMARKABLE HEALTH OF THE TROOPS.

(Special Correspondence of the MEDICAL NEWS.)

Camp Geo. H. Thomas, Chickamauga Park, Ga.,
Headquarters First Division, First Army Corps, July 3, 1898.

THIS is an ideal place for a camp. It is on a plateau between Lookout Mountain on the west and the Buzzard Roost range on the east, from 600 to 700 feet above sea-level. The soil is clay, non-absorptive, on a limestone formation which crops out in the dips and hollows. The hills are mainly gravel deposits, the moraines clearly showing glacial action. This broad plateau is covered by a growth of oak, hickory, and Southern pine, from which within the park limits the underbrush has been cut. The natural water-supply is from the celebrated Crawfish Spring and Cave-rock Spring, from the former of which a pipe line, six miles long, has been laid which affords all the troops not only with a plentiful supply of cooking and drinking-water, but also is amply adequate for bathing purposes. This is supplemented by driven wells, which are from 60 to 150 feet deep, and piped to bed-rock so as to prevent any surface drainage entering in any way. The climate is warm, 104° F. in a tent not being uncommon temperature, but the extreme dryness of the atmosphere renders it possible to do very much more active labor than one could in New York with the thermometer registering 80° or 90° F., and with the amount of humidity customary in July or August. The dryness of the air here is shown by the fact that after the battle in September, 1863, there being no rain for some time, many of the killed, lost in the underbrush which then covered the battle-field, were afterward found mummified. This great dryness makes the dust very trying, and were it not for the thunder showers which occur frequently, and with almost a tropical downpour, it would be unbearable. The clayey soil is capable of pulverization into an almost impalpable powder, which sifts into every nook and crevice with astonishing rapidity, and the encampment can easily be distinguished from Lookout Mountain by a dense, yellow cloud which obscures it during the day, due

to the feet of marching men and 7000 mules and horses. The thunder showers wash this from the atmosphere, leaving it clear and wonderfully pure.

The first thing that strikes one at this camp is the tremendous grim earnestness of all, both officers and men, and the singleness of purpose animating every one. The material is wonderfully apt and adaptive. Originally clerks, farmers, mechanics, lawyers, doctors (for not a few of our profession are in the ranks), from all callings in life, they are being hammered into shape as soldiers by the hardest sort of drill and training. It is wonderful to see them improve almost daily. By weeks the improvement is as distinct as the steps on the pyramid of Gizeh. The raw Kentucky mountaineer comes in lank, slouchy, and stooping, shambling of gait, careless of his personal appearance, and in many cases barefooted, and anything but soldierly in carriage. A week's setting-up exercises, calesthenics, given an hour every morning and afternoon, the clean uniform that must be kept just so clean, and the daily inspections make a new animal of him—clean, straight, intelligent, and neat.

We have not many sick; the men are getting acclimated, and are learning to care for themselves. Regiments, like the First Maine and the Wisconsin troops, which came with good camp cooks, drawn from the lumber camps, who could properly prepare the rations, have had little or no trouble with their food, but some of the regiments from other States, mainly recruited from small towns, have had much to contend with in this respect.

The very hardest thing for the National guardsman or militiaman to unlearn is the fact that he is no longer in any State organization, and that this is not the summer camp which in days gone by has been a place of pleasant outing, but is *war* and that it means *work, work, work,* of the very hardest kind. They have first some things to unlearn, and then they must begin to learn, first that in the army the cleanliness that out of the army is next to godliness takes precedence of every thing else by miles. *Clean, clean, clean, be clean!* is the cry of every inspecting officer, and the habit of cleanliness is the hardest thing to teach the National guardsman, for he has always had some one to keep him clean, and he thinks it tough and soldierly (God save the mark!) not to change his undershirt any oftener than possible.

The prevailing disorders have been mainly enteric, and the causes have been threefold: first, the improper preparation of what was really a most excellent ration by bad and inexperienced cooks; second, exposure to cold after the evening meal. This is explained by the fact that the men come in from evening parade, which occurs just after supper and while the day is yet warm, and many of them do not change their underwear which is wet with perspiration, for the suit which they should have worn the day before, and which should be ready and well sun-dried, but lie down in their wet perspiration-soaked clothes. The nights are quite cool here and the radiation very great, consequently the trooper needs two blankets before daylight, as a rule. The body surface of these men gets chilled, and digestion being stopped, diarrhea follows from fermenting undigested food. The third factor is the "boxes from home," sweets, so-called soft drinks, and cakes and pies, all of which are much more deadly than any Spanish bullet. The improper preparation of food is being remedied by the process of natural selection, while the ills connected with damp clothing by the care of company and medical officers is rapidly disappearing. A stringent order from headquarters absolutely prohibiting the sale of soft drinks, pies, cakes, etc., has recently been issued, and with marked results of improvement.

This, in a way, brings me to speak of regiment canteens. Strange as it may seem to the advocates of total abstinence, the regiments which have a regimental canteen and which regulate the sale of beer to their own troops have also the best sick reports. I may say that there is also absolutely no drunkenness among the troops. This is very strange among such a large body of men, but it is true, and the proof is that there are no prisoners in the guard-tents—not even enough to police the camp sinks and keep them clean for a punishment. The reason for this is that in the intense absorption of the men in their work they have no time for carousal, and in the doing of so much hard work they have weariness at night demanding sleep. Withal, a man intoxicated is a man disgraced with his comrades. The older officers, many of whom served in the War of the Rebellion, remark the improvement in this regard since that time.

The present organization of the Medical Corps is to separate almost entirely the surgeons from the regimental formations and to leave no sick in the regimental hospitals, transferring all to the division hospitals. This leaves but one surgeon with each regiment, all others being transferred to service in the division hospitals and ambulance service, the former receiving all cases from the regiments and the latter making all such transfers. The staff of each division hospital, consisting of a chief and five assistant-surgeons, is so organized as to receive and care for all such cases as would be classed as "in-patients" at one of our hospitals in New York, and those answering morning sick call who would be treated as ambulant or "out-patients" are cared for by the remaining regimental surgeon in their quarters.

The regiments have been vaccinated by half companies at a time and many of the men by reason of infected arms, a double infection in most cases, are for a few days unfit for duty. These, however, are rapidly recovering, the virus used being entirely bovine and of the best quality.

The problem of camp drainage has been the most difficult one in many ways to handle. The proper construction of the sinks and latrines and their proper disinfection and policing being something that even the highest medical authorities were at least inexperienced in arranging and directing, while to the National Guard, line, or field officer they were mysteries unsolved. The recruit himself, in the densest ignorance, thinking that camp sanitation had not improved since the days of Moses, when that great general led his troops out of Egypt, went out of camp and took his spade with him "every man that he might cover what he had done." He soon began to

meet poison oak and ivy, which quickly proved a case taken in *flagrante*. Upon this subject I will soon send the MEDICAL NEWS another letter as I have a design for a latrine which has been accepted by the commanding officers at Camp Thomas, medical as well as military.

The fact is all are learning, and the men here are becoming soldiers in every sense of the word. It was a grand sight to see 10,000 Pennsylvania, Ohio, Wisconsin, Illinois, and Kentucky troops recently leave the field at a swinging double to make room for those following on the day of the division review. Truly these men are getting into magnificent form and every day brings a smaller and smaller sick return, which shows that this camp is a thoroughly healthy place and for instruction and mobilization unequaled.

JOHN MCG. WOODBURY, M.D.,
Major and Acting Chief-Surgeon, 1st Division, 1st Army Corps.

MEDICAL PROGRESS.

Complete Removal of Tubercular Glands of the Neck.—LAPLACE (*Jour. Am. Med. Assn.*, June 4, 1898) advocates the complete removal of tubercular glands of the neck, believing that the sooner such foci of disease are removed the better. The patient can then convalesce and regain health under the influence of general tonic and hygienic treatment. The main contraindication to this method of treatment is the presence of tuberculosis of the lungs, for experience has shown him that the pulmonary involvement will grow with added vigor after the removal of affected cervical glands. Tubercular glands of the neck must be differentiated from Hodgkin's disease, from lymphosarcoma, secondary metastatic lymphoma, and from syphilis. The diagnosis is usually easy. After the removal of the glands patients improve rapidly, and only in exceptional instances is there a fresh development of other glands. If care is taken to make the incision a simple one, and to secure primary union, the resulting disfigurement is slight, far less than follows if the affected glands are allowed to suppurate and discharge.

A New Method to Restore an Asphyxiated Child.—STRINGER (*Vir. Med. Semimonthly*, May 13, 1898) calls attention to the fact that the asphyxiation of an infant after a difficult labor, being due to a lack of oxygen, may be overcome if the blood is kept oxygenerated, until the sensitiveness of the child is sufficiently restored to permit normal breathing to begin. He discovered quite by accident that this oxygenation may go on through the surface of the placenta if the latter is exposed to the air. Having had a miscarriage case at the fifth month, in which the fetus, the membranes, and the placenta all came away together, he wrapped up the specimen with the intention of examining it the following morning. Great was his surprise to find several hours later that there was still a pulsation of the heart. Life had evidently been prolonged by the aeration of the blood, which took place through the placenta. Stringer has since had occasion to test this method in the case of several full-term children born asphyxiated, and has found it to work admirably. As such cases usually follow long and difficult labors, the placenta is already separated in whole or in part, so that its removal does not present any difficulty. It is to be removed as soon as possible, its surface washed and exposed to the air, when the child will live an indefinite time, as it did in the uterus, without respiration. When respiration begins, which was not for twenty-five minutes in some of the cases, pulsation in the cord will cease, and it may be tied and cut.

Diphtheria of the Vulva.—COUES (*Bost. Med. and Surg. Jour.*, May 12, 1898) reports two cases of diphtheria of the vulva occurring in children less than two years of age, the diagnosis being confirmed by bacteriologic examination. In one of these cases the affection of the vulva was secondary to the same trouble in the throat, and the patient died. In the other the lesion was primary, and the patient recovered. This makes three cases of diphtheria of the vulva which Coues has seen in less than a year, so that the trouble is probably not very rare. He advocates the examination of the genitals of every female child who contracts diphtheria in its throat.

THERAPEUTIC NOTES.

Metrorrhagia of Puberty and Its Treatment.—ROMME (*La Presse Med.*, May 4, 1898) says that the metrorrhagia of puberty is a particular type of this trouble, and is due to a debilitated state of the system from tuberculosis, rheumatism, or some other disease, the uterus, however, being in an essentially normal condition. The metrorrhagia usually follows the first attempts at menstruation, and the flow of blood is either constant, or if it ceases when the patient is absolutely quiet, recurs upon the least effort. Examination yields negative results. Hydrotherapy, with massage and friction of the whole body with rough gloves, gives satisfactory results. Seabathing is a powerful restorative, but must be commenced with great caution. An out-of-door life and moderate exercise, with a bicycle or in some other way, supplemented by such tonic and laxative medicines as may be called for, generally effect a cure. There is little help to be expected from local treatment, though a weak antiseptic douche may be used to prevent infection in the upper genital tract. Curettage is rarely indicated. For hemorrhage which threatens immediate danger the patient should be kept on her back and ice applied to the abdomen, or hot vaginal douches be given.

The Acne of Young Girls and Its Treatment.—BROCQ (*Rev. de Therap.*, May 15, 1898) says that most girls who are troubled with acne of the face are continually rubbing and scratching it, not so much on account of any feeling of itching as because of an irresistible impulse to do so, which may well be compared to a mania. Hence the importance of requiring them to wash their fingers and brush their nails many times daily with a solution of boracic acid in order to avoid infection. Treatment should accomplish the following ends:

1. The overcoming of the coldness of the lower extremities by daily friction with cologne, spirits of camphor, or by flagellations with cold water.

2. The cure of any uterine difficulty.

3. The relief of habitual constipation, by the administration to the bilious of cholagogues, and to those with a flushed countenance of preparations of aloes. The latter should never be given to patients who have hemorrhoids or genito-urinary troubles.

4. The regulation of the diet. Small meals with little fluid at a time, and plenty of out-of-door walking should be the rule.

5. The avoidance of stiff corsets and stiff collars.

Alcoholic drinks, pork, fish, cheese, shell-fish, and pastry should be prohibited. The remedies which are of most value are the laxatives, especially magnesia and washed sulphur; the alkalies, intestinal antiseptics and betanaphthol. Sometimes arsenic, sulphid of calcium, chlorid of sodium, ichthyol, nux vomica, and carbolic acid are of service. Brocq has had good success with brewer's yeast, of which half a teaspoonful or more is taken in water with each meal. If brewer's yeast is not obtaintable, baker's yeast may be substituted.

These patients should never wash with sponges, but only with swabs of absorbent cotten, wet with a hot solution of borax and soda—two teaspoonfuls of boracic acid, and one each of borax and bicarbonate of soda to a quart of water. If there is much seborrhea, a little tar soap or compound tincture of benzoin may be added. At night the face should be washed with a naphthol soap, for which may be substituted once or twice a week the following mixture:

℞	Resorcin	ʒ j
	Ac. salicyl.	℈ j
	Sap. virid.	ʒ iij.

After the soap has been used the patient puts on each pustule a small amount of a pomade, prepared as follows:

℞	Resorcin		gr. j
	Betanaphthol, Camphor	aa	gr. xiiss
	Cret. preparat.		gr. xv
	Sapon. nigris		gr. xxx
	Sulph. precip.		gr. c
	Lanolin, Vaselin	aa	℈ j.

The next morning the patient washes the face with spirits of camphor, and if she has to go out, applies a little of the following:

℞	Acid salicyl.	gr. xv
	Zinci oxid.	ʒ iij
	Lanolin	ʒ vj
	Vaselin	ʒ xij.

The face is then gently wiped and dusted with starch powder.

The Best Way to Rub in Mercury.—UNNA (*Rev. de Therap.*, May 15, 1898) says that mercurial inunctions are better made with a soap (*sapo cinereus*) than with the classical gray ointment. The soap is prepared from lard and potash-lye, to which is added five per cent. of benzoinated lard and one-third of its weight of mercury. In its therapeutic action 4 drams of this soap will equal 6 drams of gray ointment. The soap is rubbed in with the hand, which should be moistened with warm water four or five times during the fifteen minutes which are necessary to insure a thorough penetration of the mercury. There remains on the skin only a thin, grayish film. This method has several advantages. It is far more cleanly than the application of the ointment, the mercury is more quickly absorbed, while it is applicable to very greasy skins, which resist the ointment. Soaps may also be made of the salts of zinc, lead, etc., for the treatment of obstinate skin diseases, acne, lichen, etc.

Lavage in Gastro-Intestinal Affections of Infants.—EPSTEIN (*Rev. de Therap.*, May 15, 1898) has practised lavage in infants more than 2000 times, and has never seen the smallest accident result therefrom. A small glass funnel and a rubber tube 40 to 45 centimeters in length and 6 millimeters in diameter are all the apparatus required. It is necessary to introduce the tube to a depth of 23 to 30 centimeters (10 to 12 inches) in order to reach the stomach contents. As soon as the tube comes into contact with the walls of the stomach they contract and force out fluids, and if the organ is dilated usually a quantity of gas comes out also. Warm water, to which 3 parts of salt per 1000 have been added is used to wash out the stomach, not more than an ounce being poured in at a time. This quantity is introduced and withdrawn several times. Cyanosis may be produced by the introduction of the tube, but it is not dangerous in any way.

The lavage is contraindicated in collapse, and also in the presence of cardiac and respiratory lesions. It finds its chief use in acute gastro-enteritis in order to rid the stomach of the products of fermentation, to which are due the grave symptoms of this disease. But it should not be forgotten that the stomach of a healthy infant is empty one and one-half hours after nursing, so that if it is found to contain fluid three or four hours after nourishment has been taken, it is in a pathologic state. Lavage, therefore, can also be of service in chronic dyspepsia, as well as in the more acute forms of this disease.

Treatment of Somnambulism.—HIRSCHKRON (*Ther. Monatsh.*, May, 1898) says that somnambulism is an imperfect sleep, in which the motor areas are disturbed by dreams. While sleep-walking occurs frequently in individuals of a hysterical type, the treatment usually applied for such conditions fails of its purpose in somnambulism. He had good results, however, following the application transversely through the medulla of a galvanic current of electricity. Eight or ten sittings were sufficient to cure an obstinate case of sleep-walking, and a recurrence which took place some six months later was banished by a single application of the current. The galvanization of the medulla probably acts by strengthening the vasomotor centers, so that the flow of blood to all parts of the brain is abundant and the anemic condition of part of the brain which is responsible for the nightly excursions of the patient is done away with.

THE MEDICAL NEWS.

A WEEKLY JOURNAL

OF MEDICAL SCIENCE.

COMMUNICATIONS are invited from all parts of the world. Original articles contributed *exclusively* to THE MEDICAL NEWS will after publication be liberally paid for (accounts being rendered quarterly), or 250 reprints will be furnished in place of other remuneration. When necessary to elucidate the text, illustrations will be engraved from drawings or photographs furnished by the author. Manuscripts should be typewritten.

Address the Editor: J. RIDDLE GOFFE, M.D.,
No. 111 FIFTH AVENUE (corner of 18th St.), NEW YORK.

Subscription Price, including postage in U. S. and Canada.

PER ANNUM IN ADVANCE $4.00
SINGLE COPIES 10
WITH THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES, PER ANNUM 7.50

Subscriptions may begin at any date. The safest mode of remittance is by bank check or postal money order, drawn to the order of the undersigned. When neither is accessible, remittances may be made, at the risk of the publishers, by forwarding in *registered* letters.

LEA BROTHERS & CO.,
No. 111 FIFTH AVENUE (corner of 18th St.), NEW YORK,
AND NOS. 706, 708 & 710 SANSOM ST., PHILADELPHIA.

SATURDAY, JULY 9, 1898.

THE SPANISH BULLETS.

THE terrific execution done by the Spanish bullets among our troops in Cuba, and which at first led to a severe arraignment of the Spaniards on the supposition that they had mutilated the dead, is explained by the fact that they used rifles of small caliber, but affording great initial velocity to the projectile. The Mauser rifle used by the Spanish army, and the Krag-Jorgensen with which our regular troops are equipped, are weapons of this character. It was to be expected that the wounds inflicted upon the Spaniards by our troops would be of the same description as those sustained by our men. A careful examination of the Spaniards killed in the various engagements confirms these expectations, and therefore refuted the charge of mutilation.

The missiles from these weapons work their worst havoc at the point of exit. The wound of entrance, wherever it may be, regardless of the varying density of the different tissues of the body, is usually no larger than the size of the bullet, while the orifice of exit is large and jagged. Whatever theory may be accepted as the explanation of this fact, the effect is beyond question. The careful observations of Dr. Orlando Ducker are of value in this connection. His investigations were made at Camp McCalla, where he had the opportunity of observing the dead of both parties to the conflict. A typical illustration of what he found is presented in the description of the wound in the head of one of the regular Spanish soldiers. The ball entered the frontal bone two inches anterior to the right parietal suture, and two and one-half inches above the temporal articulation, traversed the brain longitudinally, and passed out through the right occipital bone midway between the mastoid process and the occipital protruberance. The wound of entrance, as far as the inner table of the skull was involved, was clean cut and the size of the bullet, although from the outer table a piece was chipped off at the lower margin of the orifice. The wound of exit was irregular in shape, and measured about one inch in diameter, damaging alike the inner and outer tables of the skull. There was a complete longitudinal fracture through the frontal bone. In this case, as in a similar one described, the fracture did not communicate with the wound of entrance or that of exit. These fractures are supposed to have been due to the great velocity of the missile through the brain substance by which sufficient time was not allowed for cell compression, resulting in the bursting of the skull, so to speak. This effect is intensified by a deforming bullet or by an expanding bullet, as it widens the area of compression. An exploding bullet would be still more destructive, but there is no evidence that such a missile is being used by the Spanish forces.

A recent investigation of some samples of Mauser cartridges used by the Spanish troops which were sent to Washington by the marines at Guantanamo, has aroused the indignation of ordnance experts. The bullets were found to be enclosed in brass casings, which, as is well known, can hardly fail to cause blood-poisoning in a person wounded by them, no matter how slight the injury. The use of brass casings is considered nothing short of barbarous, and is not countenanced in warfare by civilized nations.

MALARIA IN THE TROPICS AND ITS PREVENTION.

THE diseases incident to the campaigns in Cuba and the Philippines that are held most in dread even by the medical profession are yellow fever and dys-

entery. The fact that malaria causes more deaths than both of these, except in seasons of unusual epidemics, is often lost sight of. Accustomed to the mild attacks of malaria in their native country, which is looked upon as a distressing illness not particularly associated with danger, it is forgotten that tropical malaria is in the vast majority of cases (from seventy-five to ninety per cent.) an entirely different disease in its manifestations and termination. Even though subject to the most orthodox treatment, it is one of the most fatal of the infectious diseases.

The lesson to be learned from this is that the mortality of our troops in the present war must be kept down by adopting measures that will serve to prevent infection. But prophylactic measures can only be effectual when based upon accurate knowledge of how the infection gains access to the system. The recent investigations of Koch in the German Colonies of East Africa tend to show that the conveyance of the disease by the atmosphere or by water is quite improbable, while, on the other hand, the fact that the disease can be communicated by suctorial insects, particularly by the mosquito, he believes has been established beyond peradventure.

This belief is gradually gaining adherents among our best experimenters and observers, and the investigations of Mason, of Ross, and of others, as well as the corroborative testimony of those who have great personal experience in the Oriental tropics, tend to make this teaching worthy of acceptation.

It is a fact that malaria affects those who engage in breaking up the soil; those who sleep on or near the earth; those who bathe in and drink stagnant, marshy water; those who are fatigued by long marches and enervating surroundings; but it would seem to be becoming yearly more evident that these are merely contributory causes of a kind that may be operative to facilitate the occurrence of any infectious disease. The fact that none of the plasmodia of malaria has yet been found in any other human media than the blood is a very strong argument in favor of the view which attributes the spread of malaria to the propagation of blood parasites by the mosquitoes.

It will be seen from reading our Berlin letter of this week that Koch considers the use of the mosquito net the most efficient means of preventing malarial infection. He, like other investigators and travelers in infected countries, was able to completely ward off the disease by the employment of this comparatively simple expedient. This, taken in connection with the statements of Emil Pasha and other travelers concerning the efficaciousness of mosquito-netting, tends to increase our faith in it as a part of the soldier's outfit. It may be possible to provide our troops with mosquito netting and hammocks made of some extremely light material. Then, if discipline is enforced with sufficient rigor to prevent soldiers from bathing in marshy, stagnant water, where mosquitoes find their greatest facility in propagating, in becoming the extra corporeal host of the plasmodium, and in carrying their poison into the human body, our campaign in Cuba may be robbed of what verily seems to be now one of its greatest terrors.

Another very important fact that should not be lost sight of is that most investigators of the etiology of malarial fevers are united in the conviction that quinin is the most reliable prophylactic agent, although it is often given in too large doses. Koch avers that "black-water fever" is nothing less than hematuria due to the toxic effect of quinin, plus malarial fever. There is no doubt that the plasmodia are extremely susceptible to the action of quinin, even when given in small quantities. Our soldiers should profit by the experiences of the French troops in Madagascar and of the Germans in their East African possessions in warding off malaria. It was the unanimous sentiment of those who studied the medical side of these campaigns that quinin, 6 to 10 grains in twenty-four hours, was a most efficient prophylactic, provided reckless and unnecessary exposure was avoided. The most reliable preparation is the hydrochlorate, and the most suitable way of administering it is in capsule or tablet form at meal time.

Dr. Hyatt, the United States Consul formerly at Santiago de Cuba, in a recent personal interview, stated that during his two years of residence there his only means of avoiding malaria was by the constant administration of quinin. By taking about 4 grains of the sulphate of quinin uninterruptedly every day during the past year, every member of his family had escaped without an unpleasant symptom. The least remission in this custom, however, was attended by immediate warnings. This is the testi-

mony of a physician who had not only studied the local climatic and sanitary conditions for a year, but had endeavored to avoid as far as possible the taking of drugs. It must be borne in mind, too, that he was living under the best hygienic conditions, and amid the best sanitary surroundings that could be obtained. For a soldier undergoing all the hardships and exposure of a vigorous campaign in that country, 6 or even 8 grains of quinin daily would probably be required to produce immunity. But every dictate of prudence and of wisdom demands that he should have this security against so pernicious a disease. The exigencies of the campaign may make it impracticable to institute the universal employment of mosquito-netting, but quinin can be readily served with the soldiers' rations. In the light, therefore, of what is now known upon this subject, every soldier who loses his life from this malignant disease will be recorded as a needless sacrifice at the hands of the medical arm of the service, and every combatant who returns with his constitution wrecked by tropical malaria will justly hold the same officers responsible.

Quinin is procurable at the present time in almost any quantity. There would seem to be no reason why there need be any delay in promptly carrying into execution this imperative demand.

ECHOES AND NEWS.

Medical Men in the French Parliament.—Among the members of the recently elected French Parliament are forty-seven medical men, five chemists, and one veterinary surgeon.

Dr. Wiggin's Appointment.—The Commissioners of Public Charities recently appointed Frederick Holme Wiggins, M.D., of New York city, assistant visiting surgeon to Bellevue Hospital.

Local Analgesia.—Hackenbruch, who recently read a paper on this subject before the Surgical Congress at Berlin, considers the term more correct than that of local anesthesia, which is generally employed.

Yellow Fever in Mississippi.—During the week ending July 2d only two cases of yellow fever developed in Mississippi and in these patients the source of contagion was easily traced. Their isolation has been perfect. Passed Assistant Surgeon Giddings maintains a small detention camp at McHenry.

Railway Hygiene in Austria.—The medical officers of the Austrian railways have requested the Government to have posted in each compartment a notice to the effect that spitting on the floor of the railway carriages is forbidden. The third-class carriages are washed at stated intervals with a five-per-cent. solution of carbolic acid.

Chicago Society of Internal Medicine.—A medical society with the above title has recently been organized in Chicago. It is announced that the chartered members will be limited to gentlemen of reputation in internal medicine, the future admissions to be approved by theses, the object being to lay the foundation for a society of the highest order of scientific excellence.

The X-Ray in Ophthalmic Practice.—The latest use to which the Röntgen-ray has been put is in ophthalmic practice, in which it has recently been employed in London to locate a piece of metal lodged in the ciliary region of the eye of a child. The skiagraph plainly showed the bit of metal, which was removed by an electromagnet after an incision had been made.

Protection of British Troops by Means of the Medical Supervision of Women.—A memorial signed by upward of 1000 mothers in various parts of the country has been forwarded by the Countess of Carlisle to Lord Salisbury, protesting against the principle involved in protecting the health of British troops by the system of medical supervision of women in the cantonments.

Foundlings in Moscow.—At the Imperial Foundling Home of Moscow, which receives annually more than 17,000 abandoned infants, the babies are dressed in swaddling clothes and their arms bound down to their sides during the time they are under the care of the wet-nurse. The latter sleeps on a straw mattress that lies upon the floor in front of the baby's crib, which is of metal.

Necessity Makes Queer Bedfellows.—One of the most distinguished medical men and scientists in the Russian Empire is about to visit England on an important mission. The extension of the Russian Empire in Asia has increased the necessity of taking measures for combating infectious diseases. Dr. Dembo has been instructed, therefore, by the imperial authorities to visit western Europe, and consult with British authorities as to the means adopted in their far-off possession for checking disease.

New Hot-water Bottles.—The expensiveness and want of durability in the ordinary rubber bottles and ice bags which have become so essential in the sick chamber, has long been a perplexing problem. Experiments with rice paper covered inside and out with a coating of Japanese lacquer led Professor Jacobsohn to recommend this material to the Berlin Society of Internal Medicine as far superior to rubber. In strength, flexibility, imperviousness, lightness, and durability it leaves little to be desired.

Hamlet a Neurasthenic.—According to Dr. T. W. Hime of Bradford, Eng., Hamlet was a victim of neurasthenia. In a communication presented to the Sheffield Literary and Philosophical Society, he says "Hamlet was a marvelously true representation of a person suffering from a

state of instability of the nervous system and of all the neurotic states dependent upon it. Hence he became a characteristic victim of neurasthenia, ready to burst out into vehement declarations of his irresistible determinations, but incapable of converting them into action."

Gratitude Galore.—According to the *Medical Press and Circular* the following death notice recently appeared in an English newspaper: "Smit.—On the 28th inst., Amy Jane Mary Smit, aged one day and two and one-half hours. The bereaved and heartbroken parents beg to tender their hearty thanks to Dr. Fealton for his unremitting attention during the illness of deceased, and for the moderate brevity of his bill; also, to Mrs. Williams for the loan of clean sheets, to Mrs. Jurgens for running to the doctor, and to Mr. Le Roux for recommending mustard plasters."

Plague in Hong Kong.—Two nursing sisters have died from the plague in Hong Kong. A plague patient in delirium coughed in the face of Miss Elizabeth Frances Higgin (Sister Frances) on April 20th; on the 25th she became ill, and was found suffering from bubonic plague, the worst form of the disease. She died on April 29th. The sister who attended her, Miss Emma Gertrude Ireland (Sister Gertrude), was admitted to the hospital May 2d. The next morning the typical bacilli were found; she died May 5th. Both these sisters served through the plague epidemic of 1894.

Honor to Whom Honor Is Due.—Under this caption the *British Medical Journal* points out the fact that Professor Koch in his recent address on malaria does not claim to be the discoverer of the facts narrated by him, *viz.*, that the cattle tick is the means of transmitting Texas fever from one creature to another, that Texas cattle fever is produced by a germ, and that the mosquito is a propagator of malaria. M. Lavaran is the discoverer of the malaria parasite and Dr. Manson distinctly indicated the *rôle* of the mosquito in malaria, while Surgeon-Major Ross demonstrated the presence of the malarial parasite in the tissues of the mosquito.

Sanitation as an Investment.—In the United States alone the loss through typhoid fever and other water-borne diseases is beyond ordinary comprehension. It is not far wrong to estimate the number of persons annually thus afflicted at 300,000, of whom 50,000 die. At the lowest legal valuation set upon human life the enormous total of $278,000,000 is found to be the equivalent cash loss. If by improvement of the water-supplies the death-rate could be reduced eighty-five per cent. $236,000,000 would remain for this purpose and this amount at five per cent. annually for interest and sinking-fund charges for forty years would justify an outlay of no less than $4,054,671,000 for water purification.

Typhoid Fever at Camp Alger.—A number of cases of typhoid fever have developed at Camp Alger and a commission has been appointed to examine the water-supply. That a question so important in the selection of a camp should have been deferred until after occupation seems almost incredible. Since a large quota of the victims were furnished by the New York Cavalry it is not impossible that the germs of the disease were acquired before the men reached Virginia. It is a notable fact, however, that in the instance of a Pennsylvania regiment whose officers had the forethought to order a sufficient supply of Poland water, the perfect health thereby maintained has more than repaid for the trouble and outlay.

Physiological Chemistry at Columbia University. — The College of Physicians and Surgeons, New York, is to have the advantage of an improved curriculum in this subject. The second-year men will receive a systematic drill therein, both by lectures and by practical work in the laboratory under most favorable auspices. Professor Russell H. Chittenden of the Sheffield Scientific School, who has won for Yale so high a standing in practical teaching and in research work in physiological chemistry, and for himself a commanding position as an instructor and investigator, is, without relinquishing his duties at New Haven, to direct the organization and conduct of the new department here, and to give weekly lectures. William J. Gies, Ph.D., has been appointed Instructor in Physiological Chemistry; Alfred N. Richards, A.B., and Henry E. McDermott, A.B., assistants.

Experimenting with Bacteria.—Transferring bacteria by subsurface has been made by several experiments in clearing the forests near the Rhine. Two pits were used as the tests. One pit was 3.3 feet deep, and in the ground the water rose to about 1.6 feet from the surface. The other pit was 24 feet distant in a line perpendicular to the direction of the flow of the subsurface water. This second pit was 4.9 feet deep, 3.3 feet wide, and 39 feet long. Two specimens of bacteria were selected, micrococcus prodigiosus and the fluorescent vibrio. These are not found in the Rhine. The cultures of these species were placed in the first pit, and at intervals of half an hour samples were taken from the second pit and cultivated in the usual way on gelatine or agar plates. It was discovered that in an hour the micrococci and in two hours the vibrios had passed through the 24 feet of gravel separating the pits.

Will Another Johns Hopkins Arise?—What is needed just now in London to promote the cause of post-graduate instruction is a liberally devised and munificently endowed hospital and college. There is a post-graduate system in that city, but it differs from our American models in that it lacks centralization; it is obliged, so to speak, to go "boarding 'round" at widely separated small special infirmaries. The *Lancet* announces the fact that a new departure has been brought to its notice, namely, "a scheme for the foundation of a Medical Graduates' College and Hospital on the American rather than the Continental plan—that is to say, a college and hospital where qualified men alone are to be taught. We recognize the difficulties which must attend any attempt to combine teaching for students with post-graduate instruction. Of course, a college and hospital for post-graduates alone would be a more desirable method for giving the special

instruction they desire, but in order to do this with efficiency provision must be made on a large scale. Lecture theaters, class-rooms, laboratories, a museum, and a library must have places in such a college, and such a hospital must attract by the wealth of its general and special clinical material and, by the reputation of its teachers. Public consultations and advice to medical men on the diagnosis and treatment of their cases will require very careful management or they may possibly come to be regarded in a false light. It is hardly likely, therefore, that the scheme will receive much support from the teachers and governors of our general and principal special hospitals and in many instances an active opposition may be excited. The medical profession may subscribe liberally to the foundation and endowment of such an institution, but as the patients will not be admitted into the hospital for prolonged treatment, but rather for the purposes of teaching, it is questionable whether it will derive much support from the general public. If another Johns Hopkins can be found to provide the necessary funds the scheme will be carried out easily, but unless some munificent benefactor arises we are doubtful whether the project, which has much to recommend it, can be brought to a successful issue."

CORRESPONDENCE.

OUR FOREIGN LETTER.

[From Our Special Correspondent.]

KOCH'S OBSERVATIONS IN SOUTH AFRICA CONFIRM PROFESSOR SMITH'S DISCOVERIES IN CONNECTION WITH TEXAS FEVER—TROPICAL MALARIA — MALARIAL HEMATURIA AND QUININ POISONING—THE ROLE OF THE MOSQUITO—IMMUNIZATION AND SERUM-THERAPY.

BERLIN, June 25, 1898.

PROFESSOR KOCH has been the recipient of a series of most flattering attentions since his return from South Africa. He was met by a party of friends the evening of his arrival in Berlin, was given a banquet during the week, and on Thursday evening, on the invitation of the Deutsche Colonial Gesellshaft of Berlin, gave an account of his medical observations before an audience, assembled by invitation, that included many of the medical notabilities of Germany. Prince Arenberg, the president of the Colonial Society, presided.

Practically the whole of his talk was devoted to the subject of malaria. It had a special appropriateness to the occasion, since it is the existence of malaria in German East Africa that makes the work of colonization so difficult. The subject of Texas fever was also introduced because Koch has found it in East Africa, and it has in its etiology certain probable analogies with malaria which make it interesting. The Texas fever of East Africa Koch does not consider an importation from America. He has been able to ascertain by careful questioning of the older inhabitants that the disease in practically its present symptomatic form has existed there for generations. In fact, there is no tradition going back to its first appearance, so that it may be considered to have been endemic for 100 years at least. Koch took the occasion thus afforded him to repeat some of Professor Smith's experiments. He had not the time to repeat all of them, but was able to substantiate the extremely interesting observations as to the parasite of the disease, the intracellular pirosoma bigeminum, and its host a parasite of the tick family that infests cattle.

The communication of the disease by the ticks to the cattle was the subject of special study, particularly the hereditary form of the disease in the ticks, or at least the possibility for insects of this kind that had never been on animals affected with the fever, nevertheless communicating the disease to cattle. Koch raised several generations of ticks, and then having carried the young to a part of the country where Texas fever was unknown, placed them on healthy animals. Twenty-two days elapsed before any symptoms were noted, and he had about given up hope of any result from his experiments, when the report reached him. He expressed hearty appreciation of the acute scientific observation and patient investigation of the American pathologist, and his words were welcomed with marked signs of approval.

Malaria in its tropical forms occupied the rest of the evening. He has found that only about ten per cent. of the malaria that occurs in the tropics is at all like ordinary malaria. The quotidian and tertian forms do occur in about the proportion mentioned, but besides these there are two other forms distinctly tropical. At the height of the paroxysm in tropical fever, there is a persistence of the highest febrile temperature for some thirty-six hours in marked distinction to the almost immediate fall of the temperature after it has reached its acme, as is always seen in America and Europe. The parasite of the tropical forms is very similar to that of tertain fever, but the plasmodium is smaller in the various stages. The so-called spore forms, which are really fully-formed, minute plasmodia, set free after the breaking up of the rosette forms, are not more than one-third the size of the hematozoic sporulation (?) forms of Italian observers. Partly, perhaps, because of their extremely small size, Koch has never seen them in the blood, but has seen them in the spleen.

The constancy with which certain forms of the parasite occur at certain stages of the disease is remarkable. An examination of a blood specimen, though the patient had never been seen, enabled one to say positively in what stage of the disease he was when the blood was withdrawn. There is especially noticeable a small signet-ring form of tertian fever, and having even more distinctly the crescentic enlargement of the ring opposite the signet. In the tropics this is not more than one-half as large as the tertian signet-ring form, and is always found just after the paroxysm is over.

When quinin is given while the parasite is young and delicate, during what used to be called sporulation, though falsely, the plasmodium being less, not more resistant to external influences at this time, it is not hard to break the disease up. Entirely too much quinin is given in the tropics, however, and without due regard to its specific action, which is not any theoretic antiperiodicity, but is

its fatal effect on the plasmodium. One gram (15½ grains) is enough for prophylaxis, and scarcely more is needed to avert a paroxysm during the course of the disease if it is given while the parasites are especially irresistent to its action.

Koch thinks that the *Schwarzwasser fieber* (the black water fever), that is so much dreaded in the topics, the malarial hematuria of the books is really not due to malaria at all, but is a symptom of quinin intoxication. He has never seen it in cases where quinin had not been used, and as an idiosyncrasy for quinin often exists, it is possible for severe toxic symptoms to occur without much of the drug having been taken. Koch has not seen in his tropical experience the remittent form of malaria, and thinks that when there is a febrile temperature between the regular paroxysms of the disease that it is due to some complication.

As to the conveyance of the disease, air and water as media of the contagion being absolutely excluded, Koch thinks that the disease is spread by mosquitos. It exists only where mosquitos are present. Though very common in the islands along the African coast, there is one of the islands off the German East African coast that is free from it, and mosquitoes are not found on the island. Koch found mosquito nets afforded effectual protection against the disease when wandering over infected belts of territory. The analogies for such a means of contagion are by no means wanting. The filaria sanguinis hominis has the mosquito for an intermediate host, without a doubt. The cachexia, fatal in most animals, and often extremely severe in human beings, that follows the bite of the Tsetze fly, is probably due to the inoculation of some organic infectious material capable of reproduction in the organism, rather than to the injection of simple toxic substances. The study of Texas fever is especially interesting in this regard, as showing the possibility of the power of infection being transmitted from generation to generation in the host. It is possible that the cycle of evolution of the malarial parasite in the mosquito may require several generations for its completion. A direct inoculation from person to person by the mosquito seems improbable. As to the therapy of the disease, quinin is effective, yet malaria has always remained the great enemy of colonization projects in tropical countries. The methods usually suggested for ridding a country of malaria are impracticable or ineffectual. The draining of the swamps would be an immense labor and involve huge expense. The planting of eucalyptus trees is humbug. A method of immunization to the disease would open up the tropics to European civilization.

That such a thing is possible Koch firmly believes. Malaria even untreated is in any single attack a self-limited disease, and successive attacks are milder and milder. The negroes on the African coast have an acquired immunity, and have only rare, and then slight, attacks of the fever. Those who live on the mountains inland know that when they go down to the coast they will almost inevitably acquire the fever, but that the risk is less on successive expeditions and the fever ever lighter.

Even our present imperfect knowledge of the parasite may be sufficient to enable us to find a method of immunization. Koch had not been able to demonstrate the parasitic cause of rinderpest, but a practical procedure to secure immunity he thinks he has found. Of rabies almost nothing is known as to its etiology, yet a successful biologic therapeutic method for its treatment has been discovered. The aim of future studies will be in this line, for the object aimed at is one of the most humane, and at the same time utilitarian at present open to scientific study, for the opening up of the tropics will follow the discovery.

The scientific and commercial value of successful investigation here would be far beyond anything that Polar exploration (a German North Polar expedition has just sailed) can promise. Government and colonial interest in the matter must be aroused, and every incentive offered to the pursuance of successful investigation in this line.

OUR PHILADELPHIA LETTER.

[From Our Special Correspondent.]

AN INCREASE IN GASTRO-INTESTINAL DISORDERS—THE CITY'S POOR—SUMMER CLINICS AND LABORATORY COURSES—A NEW DIPLOMA MILL?—WATER FAMINE IN GERMANTOWN—THE DRUG-STORE PHYSICIAN—A CHURCH CELLAR AS A BURIAL-GROUND.

PHILADELPHIA, July 6, 1898.

WITH the advent of the intensely hot weather of the past few days and the excessive humidity which accompanied the heat, the dispensaries have been crowded and the number of children suffering from gastro-intestinal disorders has been unprecedented. Heat prostrations, too, have been numerous enough to crowd the facilities of the hospitals and at the German and Pennsylvania Hospitals it is proposed to erect tents for the treatment of this class of patients. Playgrounds have been arranged in various parts of the city, and these, with the numerous small parks which have been made during the past year, it is hoped will mitigate the suffering caused by such intolerable weather. Philadelphia is to be commended for the many improvements which have lately been made in this respect, and together with the improvements soon to be made, in the establishment of more free baths, the condition of the poor in this city will be greatly ameliorated.

While many of the regular clinics are closed, perhaps better facilities for clinical study exist now than are afforded during the winter, for in the absence of many of the older men and in the less crowded clinics there is a chance for every man to do original work and to study cases individually. This is true, also, of the many laboratory courses held by the colleges during the spring and summer, and it is becoming recognized that the student unhampered by other studies and the thought of impending examinations accomplishes more work, and work which is more valuable than the regular instruction of the college term.

With the classes which graduated this spring the reign of the three-year course of instruction ends in this city. The three-year classes graduated by the Medico-Chirurgical and the Women's Medical College are the last, both colleges having adopted a four-year course some time ago,

which had been done by the Medical Department of the University of Pennsylvania and Jefferson Medical College.

After the graduation examinations this spring a student from one of the medical schools who had failed to receive his diploma went to the Baltimore Medical College; after his arrival he wrote to his companions in misery that upon payment of a small fee they could secure diplomas July 1st. Upon receipt of this news a number of students left the city for Baltimore, and at last accounts expect confidently to secure the much-coveted degree. It now remains to be seen what action will be taken by the Pennsylvania State Board of Medical Examiners when these made-to-order physicians apply for a license to practise, a physician of Connecticut, who is conversant with the facts, having stated that they need not apply for registration in his State, as they will meet with a decided refusal.

Possibly the "war scare" may have kept more than the usual number of Philadephians in town, but whatever the cause, there is no doubt as to the number of physicians remaining in the city, whether from a desire to care for these patients or from inability to go away for other reasons. Among those who have gone to Bar Harbor are Drs. Henry C. Chapman and J. Madison Taylor, while Dr. Joseph Leidy is again at Narragansett Pier. Dr. L. Webster Fox is at Spring Lake, N. J., and Dr. Edward P. Davis at Marion, Mass.

Dr. M. O'Hara, Jr., has received an appointment as assistant surgeon to the 20th Regiment of this State.

Dr. Henry Beates has gone to the Delaware Water Gap for a short stay pending the report of the State Medical Examining Board, of which he is a member.

There is a water famine in Germantown which threatens to cause serious trouble. Complaints have been made that the residents of Chestnut Hill and Germantown are unable to get an adequate supply, and in some sections there is absolutely no water except in the early morning. The reservoir at this point is almost empty and the pumps are not sufficient to keep up with the demand, let alone fill the reservoir. It is particularly unfortunate at this time of the year, and only serves to again illustrate the absolute imbecility of the municipality which the people by popular vote empowered to create a large loan for the betterment of the public service in this as in other respects.

Dr. M. F. Middleton has been elected President of the Camden Board of Health. The reports for this year show 615 cases of contagious diseases against 466 for the year before. The last three weeks show an increase of fifty per cent. in the number of cases of typhoid fever.

The Philadelphia County Medical Society is in danger of having no report of its transactions for the past year. When the *Medical and Surgical Reporter* failed last winter the Society had placed these records in the hands of a printer; but as the County Medical Society owed the *Reporter* a small sum of money and the *Reporter* owed the printer a large sum, the latter demands payment of the large sum by the Society as compensation for the reports. The amount has not been paid, and so matters rest for the present.

An interesting question of medical ethics has just arisen in one of the hospitals of this city. A Resident of last year having opened a drug-store in connection with his practice, some of the attending physicians have refused to sign his diploma of residency, while one is urging his confrères to sign, much to the bewilderment of all who know of the affair.

The sexton of Mt. Zion Christian Church has been arrested charged with violating the regulations of the Board of Health. Charles Kennedy, an inspector, testified to finding bodies of children buried in the church cellar but eighteen inches under ground, while one, that of a child who had recently died of diphtheria, was buried at a depth of but two feet. As the law requires that all bodies shall be buried at a minimum depth of eight feet, and this seems little enough, comment is unnecessary.

RUPTURE OF THE BICEPS TENDON.

To the Editor of the MEDICAL NEWS.

DEAR SIR: The following case is, I think, somewhat unusual. Mr. J. W. K., aged seventy-five years fat and of gouty habit, while attempting to throw a stone, fell laterally and struck on his right shoulder. He immediately experienced sharp pain in the shoulder and was unable to raise the arm. When I saw him I made a diagnosis of rupture of the tendon of the biceps muscle at the point of its insertion in the bicipital groove of the humerus. There was more or less settling of the muscle toward the elbow, it failed to contract on flexing the arm, and at the point of rupture there was marked tenderness. The accident occurred during the latter part of August, 1897. The muscle is now very soft and flabby and its contour differs very materially from that of the right arm, although the patient is right-handed. Treatment has failed to improve the condition. Very truly yours,

J. T. BUCHANAN, M.D.

BENHUR, LIMESTONE CO., TEXAS, July 1, 1898.

TEST FOR IMPEY'S THEORY AS TO THE IMMUNITY IN ANESTHETIC LEPERS OF ALL TISSUES EXCEPT NERVOUS.

To the Editor of the MEDICAL NEWS.

DEAR SIR: I recently proposed to Dr. Alvarez, Superintendent of the Leper Hospital, Honolulu, the following experiments which he promised to try:

1. That serum of a blister on an anesthetic leper be inoculated on a tubercular leper to see if any regression of tuberculation results. If there is immunity of all tissues except nervous, I should expect such regression.

2. Take serum from a tubercular leper and inoculate an anesthetic leper. If tuberculation results there is no Impey immunity.

3. Take the serum from an anesthetic leper whose disease has run out and find if it is a remedy for leprosy. It should be if Carrasquilla's theory is right, although the horse has not been subject to the disease for more than a few days and the anesthetic leper has been subject to the disease for several years. But it must be borne in mind that the horse is refractory and the anesthetic leper not.

Yours truly,

ALBERT S. ASHMEAD, M.D.

NEW YORK, July 5, 1898.

SOCIETY PROCEEDINGS.

TWENTY-THIRD ANNUAL MEETING OF THE AMERICAN GYNECOLOGICAL SOCIETY.

Held at Boston, Mass., May 24, 25, and 26, 1898.

FIRST DAY—MAY 24TH.

THE President, DR. PAUL F. MUNDÉ of New York, in the Chair.

DR. A. C. SINCLAIR of Boston delivered the address of welcome, and was followed by Dr. Edwin B. Craigin of New York, who read a paper, entitled

CONGENITAL PELVIC KIDNEYS OBSTRUCTING THE PARTURIENT CANAL, WITH REPORT OF A CASE OF VAGINAL NEPHRECTOMY.

He did not consider the subject of floating kidney, but only kidneys congenitally located wholly or in part within the cavity of the pelvis. Of forty cases reported, thirty-five were on the left side. Of twenty cases studied by Roberts, six were on the left side. Of fifteen which the writer found reported since 1869, fourteen were left kidneys. The kidney on the opposite side is usually present and in its normal position. In one case studied there was but one kidney. The arterial supply generally arises from the common iliac or sometimes from the aorta just above its bifurcation. Malformation of the genitals is sometimes present. Only five cases of distocia arising from this condition have been reported, and to these Dr. Craigin added a sixth. Mrs. M. was seen May 8, 1897. She was twenty-five years old, a native of Cuba, and had had two pregnancies, with difficult deliveries. She was then pregnant 8½ months. Behind the cervix was an elastic tumor, which reduced the internal conjugate to 7 cm. External measurements were normal. It seemed impossible for a child to be born per vaginam except after removal of the tumor. After incision of the vaginal wall the tumor was tapped and found to be a distended left kidney, fixed beneath the promontory of the sacrum. Vaginal nephrectomy was performed by first clamping the vessels and ureter at the hilus, removing the kidney close to the clamps, and then replacing the clamps by ligatures. A narrow strip of gauze was carried up through the wound and pressed against the pedicle. A few intermittent uterine contractions occurred during the afternoon, and at 2 o'clock the next morning true labor began. Seventeen hours after the operation a well-formed female child was delivered with ease. The mother made a good recovery and the development of the child was satisfactory. From the previous history and the easy labor after the operation there is little doubt that the kidney was the cause of previous distocia. The writer was unable to find reported another case of vaginal nephrectomy.

DR. A. LAPTHORN SMITH of Montreal then read a paper on

CASES OF PREGNANCY FOLLOWING VENTROFIXATION; IMPROVEMENTS IN THE TECHNIC OF THE OPERATION.

His conclusions, based upon about 2500 cases reported by forty-one operators, including 111 cases of his own, were as follows: (1) As far as curing retrodisplacements is concerned, whether retroflexion, retroversion, or anteflexion with retroversion, and also prolapse of the uterus, ventrofixation, with two buried silk stitches passing through the peritoneum and fascia, gives the most reliable results. (2) Ventrofixation should be reserved for cases in which abdominal section is necessary for other reasons, such as the breaking up of adhesions and the removal of the diseased tubes which caused the adhesions. When it is expected that pregnancy may follow some other operation may be chosen because (3) although pregnancy only followed in 148 cases out of about 2500, in thirty per cent. of these, or 36, there was pain, miscarriage, or difficult labor requiring obstetric operations. (4) When suspensio uteri was performed, that is the uterus attached to the peritoneum, only a few relapses occurred; but, on the other hand, the patients were free from pain during pregnancy and the labors were less tedious; neither did they require resort to serious obstetric operations. The uterus should therefore be suspended rather than fixed to the abdominal wall in all cases in which any part of the ovary is allowed to remain. (5) A third method, it is claimed by some, namely, the intra-abdominal shortening of the round ligaments, is preferable to either ventrofixation or suspension. This may be done either by drawing a loop of the round ligaments into the loop which ties off the ovary and tube, or in cases in which the latter are not removed, simply detaching them from adhesions and shortening the round ligaments by drawing up a loop and stitching it to itself for a space of about two inches. By this means the round ligament develops as pregnancy advances, and the dragging and pain, and other more serious accidents which are present in thirty per cent. of the cases of ventrofixation, are certainly avoided. (6) If the uterus is attached to the abdominal wall, the stitches should be inserted on the anterior surface but near the fundus. Complications have been more frequent when there has been too much anteversion. (7) As large a surface as possible should be made to adhere, by scarifying both the anterior surface of the fundus and the corresponding surface of the abdominal peritoneum, in which case one buried silk suture will be sufficient to keep the uterus in good position. (8) Several have reported incidentally that they knew of many cases of pregnancy after Alexander's operation, and that in no case was the pregnancy or labor unfavorably influenced by it. Alexander's operation should therefore be preferred whenever the uterus and appendages are free from adhesions. (9) The results of Alexander's operation are so good that even when there are adhesions, it might be well to adopt the procedure of freeing the adhesions by a very small median incision and then shortening the round ligaments by Alexander's method, after which the abdomen should be closed. This could be done without adding more than one-half of one per cent. to the mortality, which in Alexander's operation is *nil*.

DR. W. R. PRYOR of New York read a paper, entitled

THE TREATMENT THROUGH THE POSTERIOR VAGINAL CUL-DE-SAC OF ADHERENT UTERI.

He said that there is much information desired regarding the manner in which adhesions are produced. Certain patients give no history of labor, abortion, gonorrhea, or unclean intra-uterine manipulations, yet retroversion and fixation are apparent. In such cases little or no disease of the ovaries is found. It is most often seen in robust servant-girls. The period at which the displacement and adhesion occurs between the uterosacral and rectal structures and the uterus is unknown. Retroflexion and retroversion are equally marked. These cases are rare, the writer having seen but five. He classes them as congenital and incurable by any known operation. As we commonly meet with adherent retropositions, they can generally be traced to abortion or labor followed by sepsis, and some to gonorrhea. When gonorrhea is the cause, the tubes are most damaged, and the adhesion is of the least degree. In patients recently pregnant, the adhesions are most pronounced. In all cases adnexal disease is more extensive than is revealed by digital examination.

In all operations for the correction of these displacements, the first step is to free the uterus, then to treat the tubal and ovarian disease, and finally to endeavor to retain the replaced uterus in the normal position. An anterior or posterior fixation of the uterus will prevent its ascending during pregnancy. Any operation which will interfere with a future pregnancy should be condemned. The operation through the belly is more free from bad influence over subsequent pregnancies. The question of the position of the uterus is not alone to be considered. The only objection which can be made to hysterorrhaphy is that in some cases the removal of the ovaries and tubes is necessary, which would not be if treated by another route. Where there is fluid, the result of inflammation, if infected, its escape is necessary. This infection is especially likely in case of occluded tubes. Hemostatic sutures are unfortunate because they strangulate the tissues, limit repair, and lock in discharges. The speaker enters the pelvis through the posterior cul-de-sac. With this incision properly made, and the patient in a certain posture, the operator can see as much as through an abdominal incision. He can incise the diseased tissues as much as necessary and leave them oozing, suturing only when large portions of the ovary are removed, or when small vessels have been opened. This operation enables one to apply conservatism in a class of cases, and in a manner which one dares not attempt by any other operation.

The speaker had operated fifty-one times through the posterior cul-de-sac. All these patients were well after three months, and the uterus in good position, with one exception. The operation is as follows: After thorough preparation of the vagina, the uterus is curetted. Selecting the fold behind the cervix which marks the reflection of the vagina, he enters the cul-de-sac of Douglas, and makes a careful digital exploration. He then introduces a retractor and lifts the uterus into the abdomen and introduces several gauze-pads into the pelvis. Then the patient is thrown into an exaggerated Trendelenberg position, and one may see and treat the adnexa as desired. He excludes all cases showing pus. After the completion of the operation, the pelvis is wiped dry and several folds of iodoform gauze are introduced into the incision. These and the uterus are replaced *en masse*. The uterus is kept in position by gauze lightly packed in the vagina above the levator ani muscle, and this is held in place by a stout roll placed transversely. A self-retaining catheter is inserted into the bladder, and the sphincter ani dilated. From seven to ten days later the patient is placed in the Sims position, and the dressings removed and renewed under chloroform anesthesia. The patient is out of bed in 2½ weeks, and vaginal support is maintained for six weeks. The operation succeeds perfectly, several patients having become pregnant. Two have been successfully confined. The speaker seeks by this operation to sever adhesions and to obliterate the cul-de-sac and form a mass of lymph between the cervix, uterosacral structures, and the rectum. The resulting scar holds the cervix upward, and the body of the uterus is thrown forward by the intra-abdominal pressure. All replacement operations which succeed obey one of two rules: either the corpus uteri is fastened high and forward, or the cervix high and backward. The first fixes the body of the uterus, while the author's operation leaves it free. The uterus is limited in mobility in one direction—the downward movement of the cervix. The after-treatment is troublesome, and must be faithfully carried out.

The discussion which followed the reading of Dr. Pryor's paper was general, and fully brought out the views of those present on the subject of fixation of the uterus. Dr. Kelly said that the operation so highly commended by the essayist is a perfectly rational one from a mechanical standpoint, but presents certain difficulties in its practical employment. Personally, he prefers the operation of hysterorrhaphy. He has performed this operation 410 times since 1889, and with most satisfactory results in each instance. Eighteen or twenty of the patients had become pregnant afterward, and with one exception, nothing unusual had marked the gestation. He does not care for Alexander's operation. The round ligaments are not designed to hold the uterus forward except during pregnancy.

DR. A. PALMER DUDLEY of New York said that he has determined never to perform ventrofixation again unless positively necessary. He has never made use of buried sutures in these cases but in one or two instances, and then he was compelled to remove them. There is always less reflex trouble if pregnancy follows an Alexander operation rather then ventrofixation, but there is danger of the occurrence of hernia. He objected to the production of scar tissue in the floor of Douglas' cul-de-sac, as in Pryor's operation, as scar tissue is always tender, and in this locality may give rise to pain or reflex disturbances.

DR. CHARLES P. NOBLE of Philadelphia said that, in his opinion, ventrofixation should be abandoned; that suspension of the uterus gives the best results.

DR. HERMAN J. BOLDT of New York said it is impossible to arrive at a satisfactory conclusion as to which is the best operation, as the opinion of each operator depends upon his personal experience. In cases of posterior displacement with firm adhesions he approves of

opening the abdomen and performing ventrofixation. He is inclined to think that Alexander's operation gives less dissatisfaction and less trouble than any other method, provided, always, that the cases are carefully selected.

DR. MATTHEW D. MANN of Buffalo said that he prefers Alexander's operation. If adhesions are present, it is desirable and proper to open the posterior cul-de-sac, break them up with the finger, and then carry out Alexander's technic. If there is extensive disease of the tubes and ovaries, the abdomen should be opened and the organs removed, the operator then having an opportunity to cure the displacement, either by shortening the round ligaments or by performing ventrofixation. It is a mistake to employ non-absorbable ligatures in the operation of ventrofixation. Under such circumstances chromicised catgut ligatures alone should be used.

DR. GORDON said his experience with Alexander's operation has been limited, but very unfavorable.

DR. H. T. HANKS of New York said that the many reflex disturbances which occur after ventral suspension and fixation are due to the fact that the uterus is fixed too firmly in the median line.

DR. E. C. DUDLEY of Chicago said that in those cases in which the uterus is replaceable the indication for Alexander's operation must be very limited. There is no normal position for the uterus. It is practically a question of normal movement of the uterus. If the organ is permanently fixed it makes no difference where it is; it is not normally placed. For that reason the operation of permanent fixation should be condemned.

DR. HUNTER ROBB of Cleveland said that many patients are operated upon unnecessarily. Many get well without any operation whatever. Where diseased tubes and ovaries are present and at the same time a retroflexed uterus, the removal of the tubes and ovaries, and separation of the adherent uterus will do all that is necessary in many cases.

DR. JAMES R. CHADWICK of Boston said that he prefers Alexander's operation whenever it is suitable. He had performed it more than two hundred times and had never seen hernia occur in a single instance.

DR. A. F. CURRIER of New York said that the operation which preserves normal anatomical conditions should be the method of choice. There is probably no operation, however perfectly designed, that will not meet with a certain number of accidents. One objection raised to the Alexander operation is that there are two wounds instead of one. By a short median incision, shortening the round ligaments from the inside, whether by the method of Dr. Wylie or the modification of Dr. Mann, better results will be obtained than by any other method.

DR. J. RIDDLE GOFFE of New York said that he had been waiting for some one to suggest an operation by which it would be possible to obtain support at the proper point, *viz.*, the uterosacral ligament. Next to the uterosacral ligament the proper ligament to utilize is the round ligament, and recognizing all the objections that have been made to Alexander's operation, and also to laparotomy, he has been shortening the round ligaments through the anterior vaginal fornix, with satisfaction to himself and success so far as his patients are concerned. The method consists in incising the vagina along the anterior wall throughout its whole length and dissecting the vagina from the bladder. From this longitudinal incision he makes a transverse incision at the cervix, passes his fingers over the top of the uterus and is able to break up adhesions. The round ligament is caught up on each side about one and one-half inches from the fundus, doubled upon itself, and drawn down, in which position two or three catgut sutures are inserted, the angle of the loop then being stitched to the uterus. This will shorten the round ligament two or three inches. By operating first on one side and then on the other the uterus can be retained in a normal position. He has performed this operation in every case of retroversion either with or without adhesions.

DR. ALEXANDER J. C. SKENE of Brooklyn said that he has tried all the operations mentioned and found that with one or two exceptions there is room for all of them. We are not in a position to decide positively which is the best. Not a word had been said about the suffering produced by scar tissue in the vagina. More trouble follows the presence of scar tissue in this locality than from abdominal section. Another objection to Alexander's operation is that many times the round ligament is absent, either congenitally absent or completely atrophied. He has specimens in which he has been able to demonstrate that there was not a particle of muscular tissue in the round ligament, and he knew that many of the Alexander operations are failures on account of defects in the ligament.

DR. BOVEE said that there are other factors besides the uterosacral ligaments and round ligaments that act as causes and as anatomic reasons for treatment of the retroverted uterus. A too short anterior vaginal wall will do as much harm in the way of producing retroversion of the uterus as relaxed broad or uterosacral ligaments.

DR. A. LAPTHORN SMITH said that the Alexander operation could be performed without ever causing hernia. He had never seen a case of abdominal section in which the round ligaments were absent altogether. He thought that Dr. Goffe's operation has a great future before it; if he can shorten the ligaments without leaving a scar on the abdomen it is certainly a great step in advance.

DR. PRYOR, in closing, said he had not intended to precipitate a discussion on Alexander's operation. In speaking of hernia he had eliminated his own cases; he thought the fault was not in the operator but due to some change in the dynamics of the pelvis. A woman's vocation will have something to do with it. The fact that Dr. Smith does not see hernia may be because he is not connected with a dispensary. Any man who has a dispensary practice will see herniæ, sometimes as large as a cocoanut. He knew of no better way to hold the uterus in position until the lymph is converted into a scar than by employing the vaginal dressing. The lymph is not inflammatory lymph, and the scars due to it cannot be seen after six months. There is no lymph found when the abdomen is opened later. This method does not cure all patients; there is a limit to it. The operation is not in-

tended to take the place of Dr. Kelly's operation; it is only to be used in adherent cases.

At the beginning of the afternoon session the topic

HAS ELECTRICITY CEASED TO BE A USEFUL THERAPEUTIC AGENT IN GYNECOLOGY?

was presented for discussion.

The subject was presented by DR. HENRY J. GARRIGUES of New York, whose paper was published in the MEDICAL NEWS for June 11th, with that of DR. EGBERT H. GRANDIN of New York.

These papers were discussed by Drs. Engelmann of Boston, Boldt, Dudley, and King of New York, Sutton of Pittsburg, and Smith of Montreal, all, with the exception of the last named, condemning the use of electricity in gynecologic practice, as in a majority of cases it not only fails to benefit the patient but does actual harm. Dr. Smith said that every year he cured two or three patients with electricity and sometimes many more. He knew about sixty living women who had been cured of fibroid tumors. In every case of fibroid he has tried to persuade the patient to submit to an operation, but when she would not consent, he has begun the electric treatment, and in many cases has cured her. In these sixty cases he used the galvanic current, and usually 125 to 150 milliamperes. The average number of sittings was thirty-five or forty. He had had ten absolute failures.

DR. HERMAN J. BOLDT of New York then read a paper, entitled

THE PORRO OPERATION, OR COMPLETE EXTIRPATION OF THE UTERUS?

After citing cases and describing the technic of the different operations he came to the following conclusion: In all cases of absolute indication for Cæsarian section the complete extirpation of the uterus should be preferred. The question arises: What would be considered an absolute indication for removal of the uterus?

1. All women who have a living child in utero at term or nearly so, and in whom the pelvic diameters are too small for the delivery of a living child *per vias naturales*.

2. When the child in utero is dead and infection of the organ has taken place.

3. In cicatricial atresia of the vagina to such an extent as to prevent delivery through the normal route.

4. When a neoplasm is present in the column of the uterus preventing the passage of a living child with safety to the mother.

5. In such cases of rupture of the uterus in which an abdominal section is indicated and suture of the uterine wound is unsafe.

6. In some cases of hemorrhage from the uterus subsequent to Cæsarian section, as in a case reported in which the operator had completed the uterine suture and although no blood oozed from the stitch-holes the hemorrhage from the vagina was so terrific that he found it necessary to change the ordinary Cæsarian section to the Porro operation.

In summing up the author came to the following conclusions:

1. Total hysterectomy should be performed in preference to a supravaginal hysterectomy, with extraperitoneal treatment of the pedicle.

2. The operation should never be performed unless absolute indications are present.

3. The uterus can be rapidly removed by applying clamps on each side: the difference in time consumed between a Porro operation and total hysterectomy is not more than half a minute. The elastic ligature is dispensed with and the proper attachment of the cervix in the lower angle of the wound nearly equals the time consumed in ligating the vessels and suturing the peritoneum after the removal of the uterus. When the child is dead in utero the organ should not be opened for the purpose of first delivering it, but the uterus should be removed *in toto* unopened.

The advantages of total extirpation over Porro's operation are: (1) Less danger of infection. (2) Practically no danger from secondary hemorrhage. (3) Less danger of intestinal obstruction. (4) A shorter period of convalescence. (5) Less danger of ventral hernia. There are practically no disadvantages.

DR. EDWARD P. DAVIS of Philadelphia said that in Porro's operation we have the best, quickest, and safest method of operating. He warned against opening the uterus if the child is dead; he had had the misfortune to make this mistake once, and thought that the sepsis which caused death was due to it. He had found it an advantage to apply the clamp as close to the ovary as possible and then to ligate and cut; four to six ligatures are necessary. When operating on the pregnant uterus one should bear in mind the presence of the artery which accompanies the round ligament, and that it is large enough to require ligation. He emphasized the point that one cannot decide upon a given delivery by the pelvic diameters. He had had four cases of contracted pelvis, in each of which the past history demanded Cæsarian section, One had been delivered by axis traction, and another had been delivered spontaneously at her own home. There is danger of wounding the ureter in operating through the lower uterine segment, but by keeping close to the cervix it will not be great. If a stump is left the relations in the vagina are less disturbed than if the removal is total.

SECOND DAY—MAY 25TH.

DR. HENRY J. GARRIGUES read a paper, entitled

OBSERVATIONS IN REGARD TO GENERAL ANESTHESIA, ESPECIALLY BY THE SCHLEICH MIXTURES,

which will appear in a future issue of the MEDICAL NEWS.

Following the discussion of Dr. Garrigues' paper DR. MATTHEW D. MANN of Buffalo read one, entitled

THE SURGICAL TREATMENT OF IRREDUCIBLE RETROFLEXION OF THE GRAVID UTERUS.

The alternatives in these cases are either to replace the uterus, or that being impossible, to empty it, the argument being that if the uterus is left displaced the death of the mother and child will result, whereas, if the uterus is emptied the mother may be saved, but the child will be

lost. This teaching should be changed, and if it be found impossible by the most improved methods, including the use of anesthesia, to replace the uterus, the abdomen should be opened and the fundus pulled up by the hand introduced behind it. If the uterus completely fills the pelvis efforts at replacement through the vagina will fail, because when it is pushed up nothing can enter from above to take its place and the moment pressure is withdrawn from below atmospheric pressure forces it down again into its old position. Even if the uterus be soft and yielding it requires considerable manipulation to get it up, and this can only be done by letting the air in behind it. Pregnancy may exist when there are adhesions and these may be an insuperable bar to retroposition until they are broken up by the hand on the inside, thus giving another indication for operation.

DR. J. WHITRIDGE WILLIAMS of Baltimore read a paper, entitled

BACTERIA OF THE VAGINA AND THEIR PRACTICAL SIGNIFICANCE, BASED UPON THE EXAMINATION OF THE VAGINAL SECRETION OF ONE HUNDRED PREGNANT WOMEN.

He said that the first work in bacteriology of the vagina was done in 1887 by Connor, who examined thirty-one cases and stated that the vagina did not contain organisms capable of causing septicemia. Since then there have been one or two articles published each year on both sides of the question and by equally competent observers. His own work was based upon ninety-two cases and in these he did not find a single streptococcus or staphylococcus aureus. He found in several cases a white skin-coccus and in a number the gonococcus.

The difference in results obtained by different men is altogether a difference in the technic; all who obtained positive results introduced specula into the vagina, and so carried in past the hymen whatever organisms were at the entrance of the canal. The author's method is to spread the hymen widely apart with the fingers so as not to come into contact with the external organs of generation, in that way avoiding introducing organisms from without. The conclusions arrived at were: (1) That the vaginal secretion does not contain the streptococcus or staphylococcus aureus. Therefore the use of vaginal douches is unnecessary, and, in many cases, injurious. (2) The whole matter is one of technic. (3) The vagina does not contain pathogenic organisms. (4) It is possible that in rare instances the vagina may contain bacteria. (5) Death from puerperal infection is from infection from without and is due to a lack of antiseptic precaution on the part of the physician or midwife.

The President's address, by DR. PAUL F. MUNDÉ of New York, which followed the discussion of Dr. Williams' paper, was then delivered. He took for his subject

PUERPERAL SEPSIS.

Among other things he said that the first step in the treatment should be the freeing of the uterus from foreign substances, which may be done with the finger or the blunt curette which was introduced by the author. The cavity may then be irrigated with a mild solution of permanganate of potash. He very seldom employs bichlorid of mercury, and never stronger than one in ten thousand. Iodoform pencils do no particular good, and mask the odor and character of the discharge. The endometrium may be packed with iodoform gauze when it is desired to bring about contraction and reduction in the size of the uterus. The curetting of a septic endometrium removes tissues which have already undergone inflammatory obliteration of their absorbent vessels, and so does more harm than good by laying open fresh channels for infection. It is better to apply to such an endometrium a strong solution of chlorid of zinc, tincture of iodin, or iodized phenol, and then to wash away the loose débris with sterilized water and to pack the cavity with iodoform gauze, which should be removed within forty-eight hours unless the symptoms call for its earlier removal. When the uterine cavity is entirely empty, even though there be general sepsis, there is no use in giving intrauterine irrigations. When pelvic cellulitis, peritonitis, or salpingitis is detected, attention should be directed toward the local condition.

The medicinal treatment, unfortunately, is not satisfactory. If the patient can be kept alive by means of stimulants and nourishing food until Nature has thrown off the septic germs she probably will recover. If her stomach gives out and nourishment and stimulants are not retained, the disease wins. The objection to the coal-tar derivatives is that they mask the fever and depress the heart. The speaker does not hesitate, when the heart condition warrants it, to give phenacetin in 3 to 5-grain doses combined with caffein. A few hypodermics of ergot may be useful to keep up steady contraction of the uterus.

In conclusion, he spoke of the recently introduced treatment of septic infection by means of antistreptococcic serum. His experience was limited to three cases, all of which seemed desperate. From 3 to 6 hypodermics of 10 cubic centimeters of serum were injected at intervals of from four to twelve hours, and all three patients recovered.

DR. E. W. CUSHING of Boston then read a paper, entitled

THE INDICATIONS FOR PARTIAL AND TOTAL HYSTERECTOMY *via* ABDOMINAL AND VAGINAL ROUTES.

The following methods were considered: (1) Suprapubic amputation, extraperitoneal or intraperitoneal, where the cervix is cauterized and drained. (2) Total extirpation by the abdominal route, where the vagina may be left open, the peritoneum being open or closed. (3) Total extirpation by way of the vagina, either with the clamps, morcellation, or ligatures.

The extraperitoneal treatment of the stump has been abandoned by all except in exceptional cases. It may be employed when in an emergency it is necessary to terminate the operation immediately, as from shock from previous hemorrhage, in rupture of the pregnant uterus, for instance. The method of treating the stump intraperitoneally has been abandoned by the author because, when there is reason to fear infection from the cervical

canal, it is better to remove the entire cervix. As the healthy cervical canal is not septic, cauterization is not necessary if the entire uterine cavity has been properly cleansed and disinfected previous to the operation. Little of the cervix is left if the incisions which amputate the uterus are made obliquely. He considered the indications for removing the whole uterus or leaving a stump. The consensus of opinion appears to be in favor of total extirpation. This prolongs the operation twenty minutes to half an hour. The evil of the operation is the danger of wounding the uterus. There is also danger of infection of the peritoneal cavity from the vagina. The cervix is the seat of sexual sensation to a certain degree, and it is desirable to leave it unless there are indications for its removal. When hysterectomy is performed for malignant disease total extirpation should be selected.

When the cervix has been removed either the vagina may be left open for drainage or the peritoneum may be closed and the vaginal raw surface left open, or the vagina and peritoneum may be wholly closed. The speaker preferred to close the vaginal opening entirely and use a glass drainage-tube. The method of election is the closure of the vagina and peritoneum. In this way no raw surface is left. The combined method of operating complicates matters. He discussed the relative value of abdominal and vaginal hysterectomy and the matter of personal equation, the training of the operator being an important factor.

COLLECTIVE INVESTIGATION ON THE USE OF THYROID EXTRACT IN THE TREATMENT OF FIBROID TUMORS.

DR. WILLIAM E. MOSELEY of Baltimore based his remarks on investigations made in the Baltimore Medical College and five cases in his own practice. He had come to the following conclusions:

1. That whereas some patients can take large doses of thyroid with impunity, others are injuriously affected by small amounts, and one should begin with a minimum dose, say 3 grains daily, and increase it very slowly, watching the heart and kidneys carefully.

2. In cases of bleeding fibroids, thyroid has an influence toward checking the loss of blood, and in certain cases it is followed by diminution in size of the growth.

3. That its use in appropriate doses is followed by improvement in the general health, probably due to the cessation of loss of blood.

Nine to 15 grains was the maximum dose, 1 to 5 grains three times a day. The average duration of treatment was nine weeks.

DR. JOHN B. SHOBER of Philadelphia spoke of the administration of the extract of mammary gland. The first case was that of a woman thirty-two years of age, the mother of two children. Since the birth of the last child she had suffered from dysmenorrhea and menorrhagia, and for two and a half years had been conscious of the presence of an abdominal tumor, which rapidly increased in size. When seen it was as large as a pregnant uterus at term. The next menstrual period after using the mammary extract lasted but three days, and three months later the tumor had been reduced one-third in size. The second case was that of a woman thirty-two years old, who had a large irregular multilobular fibroid, accompanied by painful menstruation and menorrhagia. She was put on increasing doses of mammary gland in January, 1898. The periods have become more regular and less painful, and she has gained in weight and strength. In the case of a third woman menstruation had been painful and irregular for two years. She was put under treatment in November, 1897, and menstruation is now regular and free from pain.

He said the drug seemed to have an influence over the uterine tissue something like ergot; it produces cramps, and has the same effect on the growth.

DR. HOWARD A. KELLY of Baltimore read a paper, entitled

THE TREATMENT OF MYOMATOUS UTERI.

He took the stand that the treatment *par excellence* of myomatous uteri is myomectomy, and that hysteromyomectomy must be reserved for exceptional cases. We must take hysteromyomectomy down from its prominence, because myomectomy is the operation to be thought of first; it is the operation of election in treatment of fibroid uteri and has an important field in women under forty years of age. During the child-bearing period it should be performed no matter what the size or number of the tumors. Hysteromyomectomy is to be preferred after forty in most cases. The risks of myomectomy are greater than those of hysteromyomectomy. Scarcely any two myomectomies are alike, and it is a more prolonged operation. His list of cases includes ninety-seven operations in whites and blacks since October, 1890. The myomata occupied every conceivable position from the fundus to the cervix. From one, seventeen myomata were removed. These operations include tumors in all positions and of all sizes up to the size of a six-months' pregnancy. Some were subperitoneal, many were interstitial, and many submucous. In numerous instances he opened the uterine cavity extensively; in one case it was opened from the cervix to the fundus.

The technic is one requiring extreme care. As to asepsis, he always wears rubber gloves and has his assistants wear them. He begins with the largest accessible tumor, and grasping it with a pair of forceps keeps up traction, and peels back the tissues, often using gauze to force them back, handling the structures as little as possible. He takes extreme care in stopping hemorrhage, sometimes using as many as four catgut sutures tied tight. The hemorrhage is to be stopped by bringing the opposing surfaces closely together. In rare instances where the muscular tissue is soft the vessels may be pulled out and ligated, but this is exceptional. If the hemorrhage is not well under control both uterine arteries may be tied. One objection is that on opening the abdomen the uterus looks frightfully diseased, and the impression is that it is nothing but a mass of myomata and that it is impossible to leave behind any of the uterus. The fact is, the uterus is often greatly hypertrophied; there is always abundant uterine tissue to leave behind. One can work out a plan and determine just what kind of operation it is going to

be. A sound in the uterus will discover at once whether the tumor is low down or high up.

SHOULD NON-ABSORBABLE LIGATURES BE DISCARDED IN GYNECOLOGIC SURGERY?

was the subject next presented for discussion.

Papers on this subject by Drs. S. C. Gordon of Portland, R. Stansbury Sutton of Pittsburg, Charles P. Noble of Philadelphia, and Howard A. Kelly of Baltimore, who participated in the discussion, will appear in future issues of the MEDICAL NEWS.

DR. A. PALMER DUDLEY then read a paper, entitled

CONSERVATIVE OPERATIONS UPON THE UTERINE APPENDAGES,

and reported two cases in full.

DR. ALEXANDER J. C. SKENE of Brooklyn showed an apparatus for searing the pedicle with the electrocautery. It consists of a pair of forceps with a galvanic wire in one blade. The broad ligament is simply seared, and the hemorrhage controlled. The vessel or ligament is isolated, compressed, and the current passed through it for half a minute. For the pedicle of the round ligament in cases of ovariotomy he has a pair of curved pressure forceps with claws to prevent the pedicle sliding out. It is necessary to place a pad under the forceps to prevent any desiccation of the abdominal wall; he uses his fingers for this purpose. The object is to desiccate, but not cauterize. The stump is completely desiccated and may be dropped into the abdominal cavity without the slightest danger of hemorrhage. He has closed the abdominal wound more than one hundred times and never had a suggestion of hemorrhage in any case. The heat is never high—190° F; it is gauged by the amperemeter. The length of time required for securing an artery or any thing short of a large mass of tissue is very short. For a pedicle like the broad ligament a minute is amply sufficient.

DR. J. WESLEY BOVEE of Washington read a paper, entitled

PATENCY OF THE STUMP AFTER SALPINGECTOMY.

His attention was first called to this subject by the case of a young woman who came to him with a large abdominal tumor, and with a history that both tubes and ovaries had been removed, but there could be no doubt of advanced pregnancy. Since that time in five specimens of uteri removed months after ablation of one or both appendages, the canal of the tube stump was still pervious. He then described briefly these cases of his own, and also spoke of those seen by other writers. The consequences of the permeability of the canals of these stumps are pregnancy and peritoneal infection. But four cases of pregnancy have been reported, but probably others have occurred. To some women pregnancy following the removal of the diseased adnexa means eminent danger, and is a condition to be absolutely avoided. If ligation of the Fallopian tubes as now practised is not successful, some other method must be devised.

The topic

THE SURGICAL TREATMENT OF STERILITY; HOW FAR IS IT JUSTIFIABLE OR EXPEDIENT?

was discussed by Drs. Mann, Wylie, and others. Dr. Wylie's paper will be published later in the MEDICAL NEWS.

THIRD DAY—MAY 26TH.

DR. ANDREW F. CURRIER of New York read a paper, entitled

(*a*) REMOVAL BY ABDOMINAL INCISION OF THE REMAINS OF AN EXTRA-UTERINE FETATION OF FOURTEEN-YEAR'S DURATION; (*b*) THE METHODS OF CHOICE FOR THE REMOVAL OF HAIR-PINS FROM THE BLADDER IN WOMEN,

and was followed by DR. EUGENE BOISE of Grand Rapids, Mich., whose paper was entitled

POST-OPERATIVE SALINE INFUSIONS,

which will appear in a future issue of the MEDICAL NEWS.

DR. HENRY D. FRY of Washington then read a paper, entitled

STREPTOCOCCIC INFECTION IN CHILDBIRTH, AND THE APPLICATON OF SERUM-THERAPY.

He said that the opinion of different investigators varies a great deal. Of 83 cases reported, in 10 the result was good, in 8 it was inactive, and 65 doubtful. He thought that this varying opinion might be explained by the fact that bacteriology is still in its infancy. Bacteriologists are in dispute over many points, some claiming that the serum only protects against infection from the same variety of germs from which it is derived. The particular infection must be due to streptococci. The protective power of the patient must be such that the infection can be circumscribed. The earlier it is commenced the better is the chance for success. The danger of delay is that the suppuration may break through the walls and the infection become general; but marked beneficial results have followed injections delayed eleven, fifteen, and twenty-four days. The injection should be administered once a day, preferably in the evening. The initial dose is from 5 to 10 cubic centimeters, but larger doses may be administered in severe infections. If it has a good influence it usually shows itself after the first two or three injections, but its use should not be discontinued too early. The general treatment is sustaining; the local treatment is antiseptic to destroy the bacteria and limit the amount of toxin. Out of 119 cases there were 77 recoveries and 42 deaths. The author thought it unfair to condemn the treatment because the majority of cases in which it has been used have been improperly selected, and many of the patients were moribund before the serum was used.

DR. WILLIAMS thought a certain technic should be followed, and cultures taken directly from the uterine cavity. Investigations show that when the streptococcus is present there is a mortality of nearly fifty per cent. He did not think the value of serum as great as claimed. He had seen cases in which there was a chill on the fourth day with a temperature of 104° or 105° F., which suddenly dropped to 100° F. If these patients had been treated with serum the improvement would have been attributed to it.

DR. REYNOLDS spoke of the virulence of pure strep-

tococcic infection. Patients infected by the streptococcus or the colon bacillus, when treated early, promptly and thoroughly locally with the curette, usually get well. If these forms of infection are complicated by streptococci the prognosis is doubtful. He had seen many recover, but more died. His experience with pure streptococcic infection has been that the patient has died; he has had but one recover, and she was seen at the time of the initial rise in temperature before the chill. She was curetted and put on strychnin and tonics. He had not had an opportunity of trying serum in favorable cases, but had tried it in advanced cases, without altering the fatal issue. He thought the serum should not be used unless a bacteriologic examination by an expert shows the streptococcus to be present.

DR. NORRIS said he believed we would some day find that there are certain cases which will be benefited by antistreptococcic serum, but not until we are able to know more of the natural history. There is a difference between the diphtheria bacillus and the streptococcus; the diphtheria bacillus loses its virulence in a relatively short time, but in puerperal septicemia, when the streptococci have invaded the organism to such an extent as to produce fever and other changes, there is a modification of the organisms in the blood and serum. With the streptococcic serum we cannot neutralize the ravages of such virulent micro-organisms but can only hope to fortify Nature until she is able to neutralize the virus produced.

DR. WILLIAMS gave his method of technic as follows: First, the external genitals are disinfected thoroughly. Then the patient is placed in the Sims position, and a sterile Sims speculum introduced. The cervix is seized with forceps, brought down, and wiped with sterile cotton. The intra-uterine culture-tube is then introduced into the uterine cavity. It is guided by the eye and does not touch the outside of the cervix. In a majority of cases a syringe has to be attached to aspirate local contents. Both ends of the tube are sealed with sealing-wax, after which it is taken to the laboratory and the contents examined.

DR. PRYOR moved that a committee be appointed to investigate and report on the value of antistreptococcic serum in the treatment of streptococcic infection whether puerperal or not. The Chair appointed DRS. FRY, WILLIAMS, REYNOLDS, and PRYOR.

The following officers were elected for the ensuing year: President, Joseph Taber Johnson of Washington, D. C.; vice-presidents, Howard A. Kelly of Baltimore, and Albert F. A. King of Washington, D. C.; treasurer, J. Montgomery Baldy of Philadelphia; secretary, J. Riddle Goffe of New York; other members of the council, Charles P. Noble of Philadelphia, H. Whitridge Williams of Baltimore, Charles M. Green and George J. Engelmann of Boston.

DR. MUNDÉ, after thanking the Fellows for their patience and favors in helping him to expedite the meeting and make it one of the most successful in the annals of the Society, introduced his successor.

The meeting then adjourned to meet in Philadelphia on the fourth Tuesday in May, 1899.

REVIEWS.

CATAPHORESIS. By WILLIAM JAMES MORTON, M.D., Professor of Diseases of the Mind and Nervous System and Electrotherapeutics in the New York Post-Graduate Medical School. New York: American Technical Book Co., 1898.

THIS is an attractively bound and well-printed volume, largely a compilation of the author's earlier articles on electromedical diffusion. The first 50 pages comprise a historical résumé of the subject. The succeeding 100 pages, with 74 illustrations, are given up to the technic of the electric apparatus necessary for cataphoresis. The remainder of the work is devoted to the therapeutic application of medicaments by cataphoric diffusion. The instances cited in behalf of its value are too few and casual to establish entire belief. The successful production of local anesthesia by the cataphoric diffusion of cocain or guaiacol cocain is very encouraging and deserving of greater trial. From the space allotted we judge that a most grateful field for its application has been found in dentistry to anesthetize sensitive dentine and gums prior to operative procedures. The bleaching and sterilization of teeth with peroxid of hydrogen are also given as accomplished facts.

The armamentarium is unstable in its present evolution and the expense of it may be an obstacle to a rapid generalization of this method which has some latent merits.

THE DISEASES OF THE STOMACH. By WM. W. VAN VALZAH, A.M., M.D., and J. D. NISBET, A.B., M.D. Illustrated. Philadelphia: W. B. Saunders, 1898.

WITHIN the past few years a number of exhaustive works on the diseases of the stomach has been published in the English language, so that even without the present work this field, which after all is rather a limited one, would have been amply covered. Without wishing in any way to detract from the merits of the book of Van Valzah and Nisbet, it must be admitted that confusion may arise from such an excess in one field when other closely allied subjects, such as the diseases of the intestines, have received so little attention.

After a brief introduction the subject matter is considered under five sections: Diagnosis and Diagnostic Methods; General Medication; The Dynamic Affections of the Stomach; The Anatomical Diseases of the Stomach; The Vicious Circles of the Stomach. The general classification is good, but the subdivisions are most elaborate and much more so than our present knowledge would seem to warrant. In this respect this book offers a very striking contrast to the recent classic work of Riegel which is laid down on very broad lines. However, the individual chapters represent a large amount of excellent work and careful research. One who is familiar with the literature of the stomach will recognize statements from other works with citations of authorities. Indeed, the small number of references is very striking when one bears in mind how extensive is the amount of investigation on this subject.

The section on diagnosis occupies 137 pages, and is an able presentation. It is, therefore, to be regretted that the sections on absorption and "digestive work" are so meager. In the section on general medication there is a very full discussion on diet. The dynamic and anatomic affections of the stomach are very well discussed. It was an excellent idea to present the effects of disorders of other organs on the stomach, and the secondary diseases of the stomach under the head of the "vicious circle of the stomach."

The number of illustrations is not large, but they are well executed. Fig. 12 representing the Oppler-Boas bacilli is open to the criticism that it does not show the characteristic enlargement of the bacilli at one extremity.

The style is good although objection may be raised to the undue use of words and terms like dyshematopoiesis, hyperchromatic degeneration, etc. Errors are surprisingly few for so large a work. Attention may be directed to the misuse of the word acupuncture, on page 493.

The publisher's work is well done and the volume will undoubtedly meet success.

THE INTERNATIONAL MEDICAL ANNUAL AND PRACTITIONER'S INDEX. A Work of Reference for Medical Practitioners. Sixteenth year. New York: E. B. Treat & Co., 1898.

THIS *Annual* still continues to present, in a somewhat condensed form, the progress of medicine and surgery for the year. The same general plan and arrangement which has characterized the work in former years has been carried out in the present volume. An exhaustive exposition of each new advance in medicine, which would only detract from the value of a work of this nature, is not attempted; but the salient features of all the important advances and discoveries are mentioned, and the many references and copious index make the book a valuable aid to the general practitioner.

A short chapter on pathogenic bacteria by Shattock, well illustrated by general colored plates, has been added. The text gives many useful hints on the methods of examination of the hanging-drop and the staining of bacteria, but far more than this is required in the diagnosis of all but a very few organisms. In a future volume the author should detail isolation and culture methods.

INTRODUCTION TO CHEMICAL METHODS OF CLINICAL DIAGNOSIS. By DR. H. TAPPEINER, Professor of Pharmacology in the University of Munich. Translated from the sixth German edition by EDMOND J. MCWEENEY, M.A., M.D., Professor of Pathology and Bacteriology, C. U. Medical School, Dublin. New York and Bombay: Longmans, Green & Co., 1898.

THE purpose of this little work is to furnish the student with a guide, which shall be at once compact and reliable, to the simpler chemic and microbiologic data required in modern diagnosis. The small scope of the work renders completeness almost impossible, and yet there are contained within its 147 pages most of the necessary elements for modern laboratory work essential to the scientific establishment of medical diagnosis. As an elementary text-book it will unquestionably find a sphere. More than this it cannot hope to accomplish. The paper and illustrations are very poor.

THERAPEUTIC HINTS.

Treatment of Ascarides in Children.—

℞	Ext. spigeliæ fl.		ʒ v
	Ext. sennæ fl.		ʒ iii
	Ol. anisi, Ol. cari	aa	gtt. iii.

M. Sig. One to two tablespoonfuls two or three times a day.

Formula for the Administration of Cascara Sagrada.—

℞	Ext. cascar. sagrad.		gr. xxx
	Ext. frangulæ		gr. xv
	Pulv. aloes, Ext. gentian.	aa	ʒ i.
	Saponis		q. s.

M. Ft. pil. No. LXXX. Sig. One pill at night. —*Pruys.*

For Amenorrhea.—

℞	Strych. sulphat.		gr. ½
	Ferri peptonat., Mangani lactat., Scammonii	aa	grs. xx.

M. Ft. pil. No. XL. Sig. Two to four pills at night.—*Gutaud.*

For Infantile Convulsions.

℞	Moschi		gr. viii
	Acaciæ		ʒ ss
	Aq. fœniculi, Syr. aurantii	aa	℥ i.

M. Sig. One teaspoonful every one or two hours. —*Solomon.*

For Chronic and Intractable Vulvar Eczema in Children.—

I.—Spray affected region three times a day with a two-per-cent. carbolic solution.

II.—Once a week make a light application of ordinary acetic acid.

III.—If there be spots of ulceration cover them with a powder composed of one part of finely powdered iodoform and two parts of alum.

To Relieve Neuralgia of Phthisical Patients.—Capitan prescribes the following ointment. A very small quantity is lightly applied, and the part covered with some impermeable material and absorbent cotton. The application must be discontinued as soon as the skin becomes even slightly reddened:

℞	Guaiacol, Methyl salicylatis	aa	gr. lxxx
	Ext. belladonnæ		gr. iiiss
	Ext. opii		gr. iv
	Vaselin, Lanolin	aa	ʒ ss.

M. Sig. External use.

In very acute cases, menthol (15 grains), antipyrin (30 to 45 grains), or bromid of potassium (80 grains) may be added.